National Capital Planning Commission

10th Street SW & Banneker Connections Public Meeting

May 21, 2013

SW Ecodistrict

National Capital Planning Commission

Agenda and Purpose

I. Welcome & Project Overview 6:30

II. 10th Street / Banneker Connection 6:45

- ❖ Stormwater Study
- ❖ 10th Street Streetscape Improvements
- ❖ Banneker Connection Concept

III. General Questions & Comments 7:15

IV. Discussion at Boards 7:30

V. Adjourn 8:30

The SW Ecodistrict

A VISION PLAN FOR A MORE SUSTAINABLE FUTURE

National Capital Planning Commission

DECEMBER 2012

GSA Coordination

Federal Triangle South

- RFI Issued .....December 2012
- Industry Day .....January 4th
- Responses Due.....February 4th
- Determine Path Forward.....May 2013
- Issue RFP.....Fall 2013

Additional Coordination

- Smithsonian Institution Master Plan

- Banneker/10th Street Determination of Eligibility
  - → National Park Service Cultural Landscape Report

Private Development

JBG – New Office Building at L'Enfant Complex fronting 10 Street

10th Street + Banneker Overlook

10th Street Phased Streetscape Improvements + Banneker Overlook Pedestrian Connection

10th Street + Banneker Overlook

Monumental Core Framework Plan
(2009)

SW Ecodistrict Plan
(2013)

10th Street + Banneker Overlook

Project Partners

National Capital Planning Commission

National Park Service

DC Department of Transportation

Key Stakeholders

US Commission of Fine Arts

DC Office of Planning

General Services Administration

DC Historic Preservation Office

DC Department of the Environment

DC Water

Smithsonian Institution

US Postal Service

Private Property Owners

PN Hoffman

JBG

Urban Reit

Project Purpose

10th Street Phased Streetscape Improvements

- Establish a cross-section dimension for the 10th Street right of way to inform the RFP.
- Prepare conceptual designs and identify programmatic opportunities for phased streetscape improvements.

Banneker Overlook Pedestrian Connection

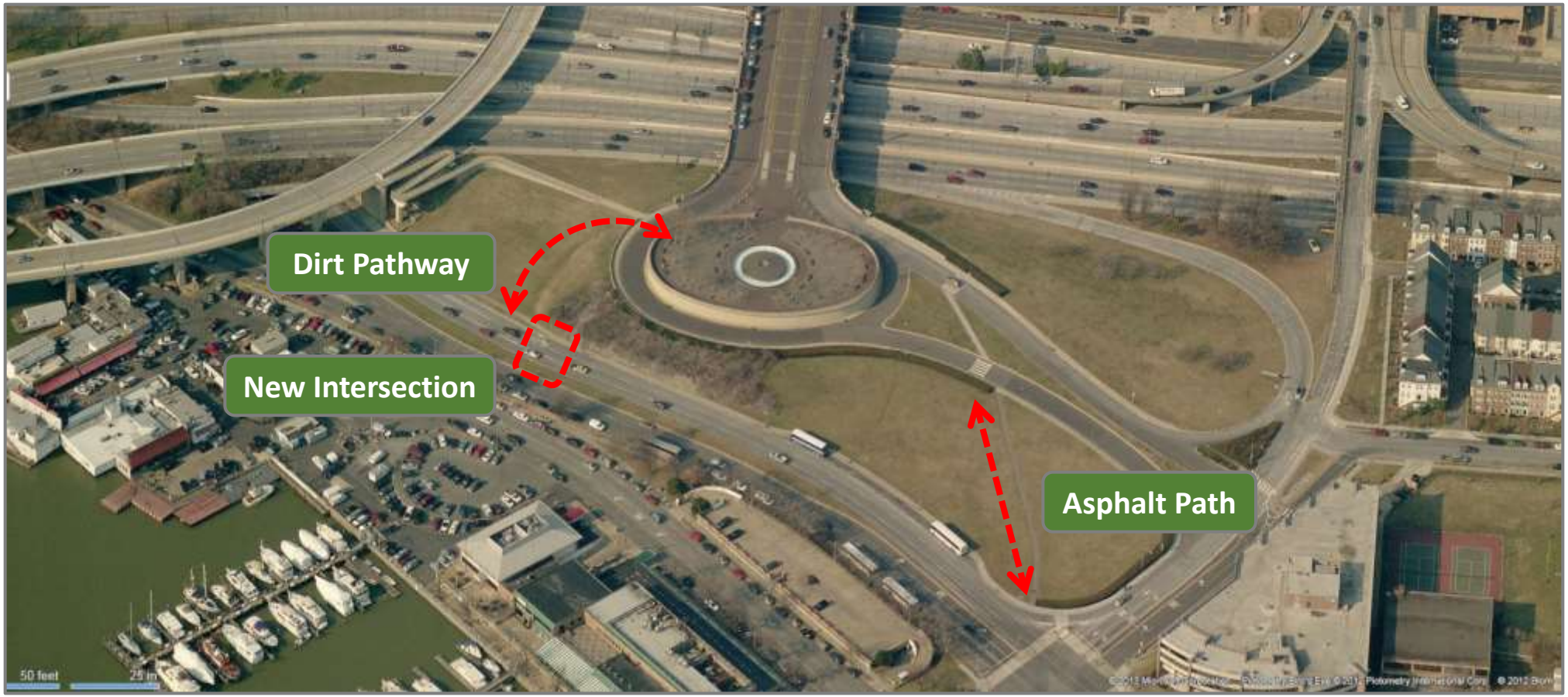
- Design a pedestrian connection that links Banneker Overlook with The Wharf.

Stormwater Study

10th Street Existing Conditions

10th Street Rendering

Banneker Overlook Existing Conditions



Next Steps

Upcoming Milestones	Date
Public Meeting	May 21st
Information Briefing to NCPC	June 6th
Information Briefing to CFA	June 20th
SW Ecodistrict Task Force Meeting	~July
SW Ecodistrict Task Force Meeting	~September
Conceptual Designs to NCPC	September 5th
Conceptual Designs to CFA	September 19th

STORM WATER INFRASTRUCTURE STUDY
Modeling and Analysis
10th Street Corridor

Stormwater Study Goals 10th Street Corridor

Meet SW Ecodistrict targets to use water more efficiently.

- 70% Reduction in Municipal Water Use

Exceed the DDOE Stormwater Regulations

- Minimize Stormwater Run Off
- Maximize Green Area Ratio
- Reuse Stormwater

Evaluate ways to close the gap between potable water demand and storm water harvesting.

Stormwater Value In the 10th Street Corridor

Quantitative Value

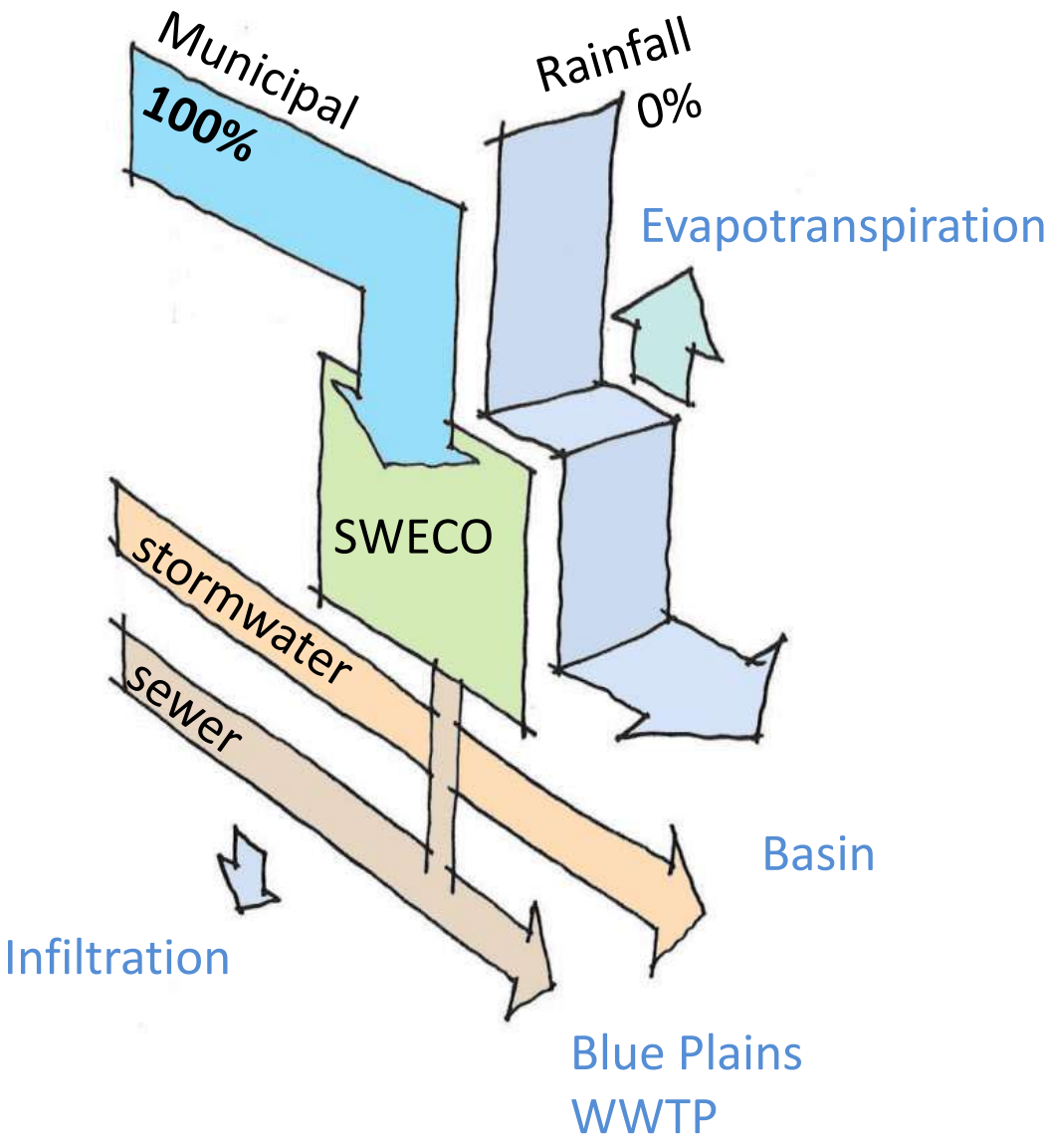
- Share costs between private and public areas
- Avoid fees
- Generate stormwater credits
- Use credits and avoided fees to offset capital costs

Qualitative Value

- Improve environmental quality:
  - -Enhance outdoor thermal comfort
  - -Enhance Biophilia
- Create identity for new district neighborhood

Existing Water Source Distribution

Existing

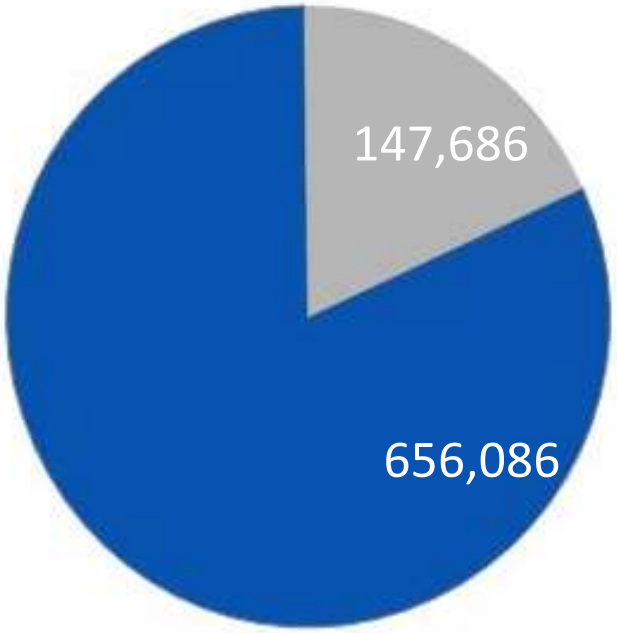


- **Rainfall sheets off site to Basin.**
- **Minimal tree and discontinuous plant communities.**
- **100% Municipal Water is needed to meet 10th Street Corridor demand.**

Modeled Daily Water Demand

Existing

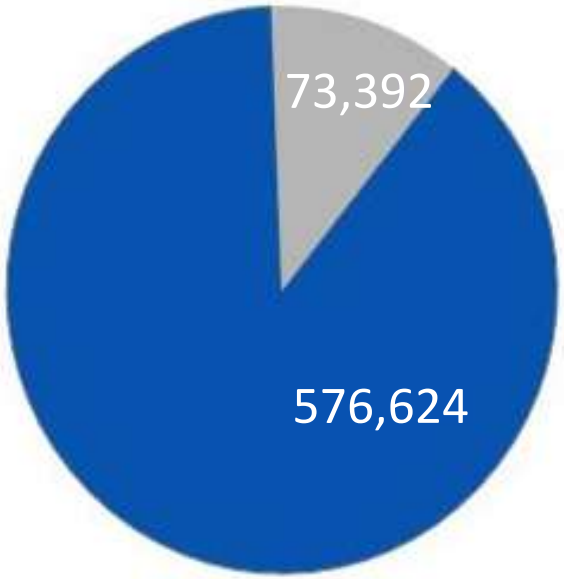
803,772 Gal/Day



Efficient Fixtures

(20% Reduction in water with 33% increase in development)

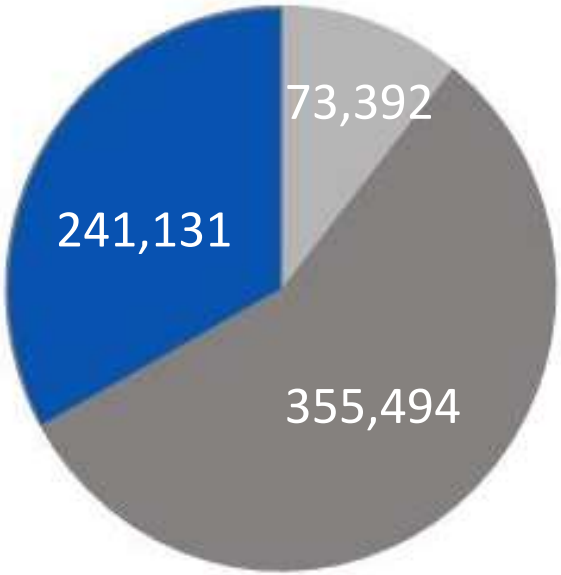
650,016 Gal/Day



SWECO Target

(70% Reduction Municipal Water Use)

650,016 Gal/Day



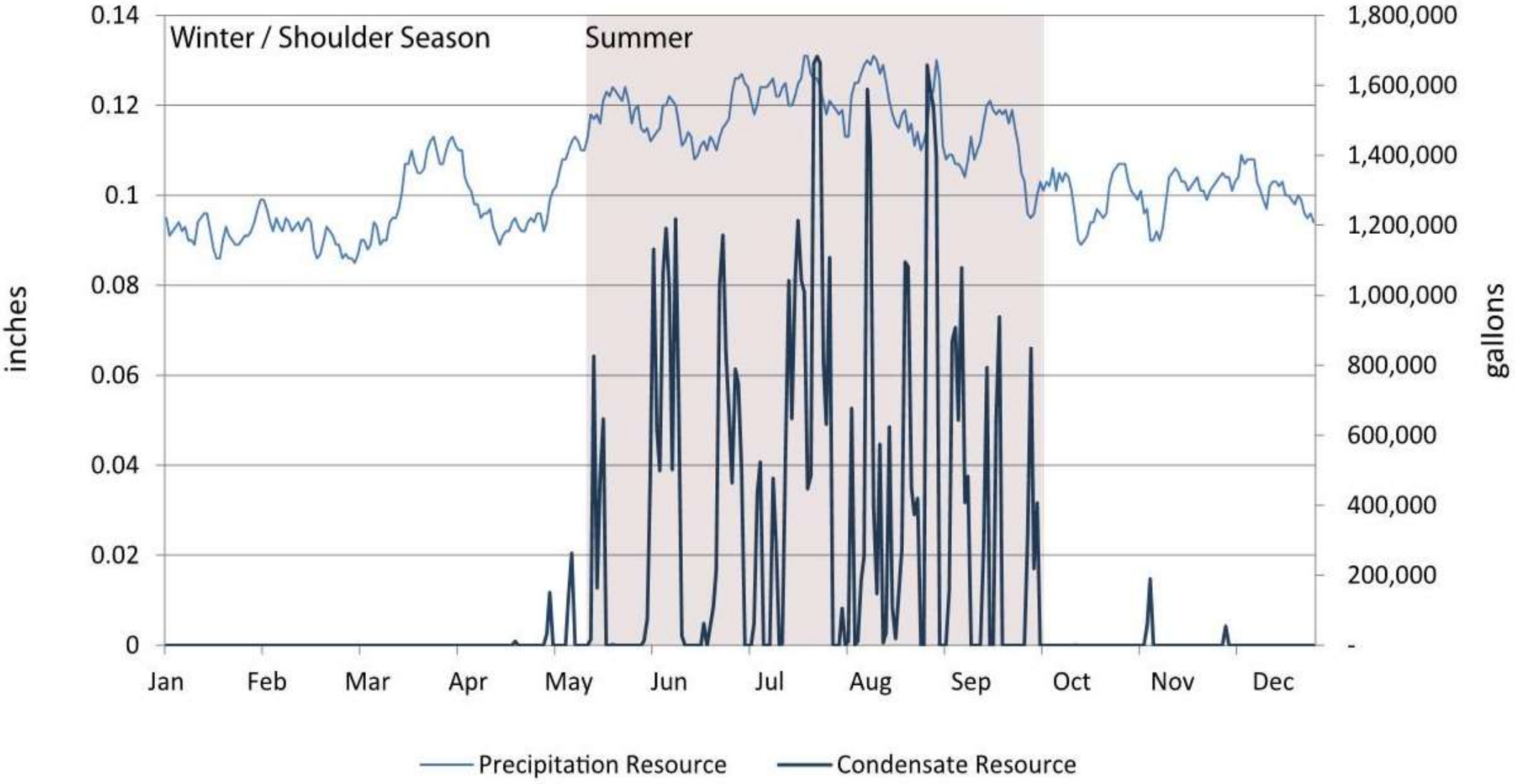
30% Municipal Water Goal

Potable Demand

Flush Demand

Gap

Modeled Daily Precipitation and Condensate Resource



Modeled Green Areas for Water Reduction

Flow Through Swale
20% Reduction

Flow Through Planter
20% Reduction

Roof Intensive

40% Reduction

Roof Extensive

100% Reduction

Tree

Reduction
15 cf/year

Impervious

0% Reduction

Compacted

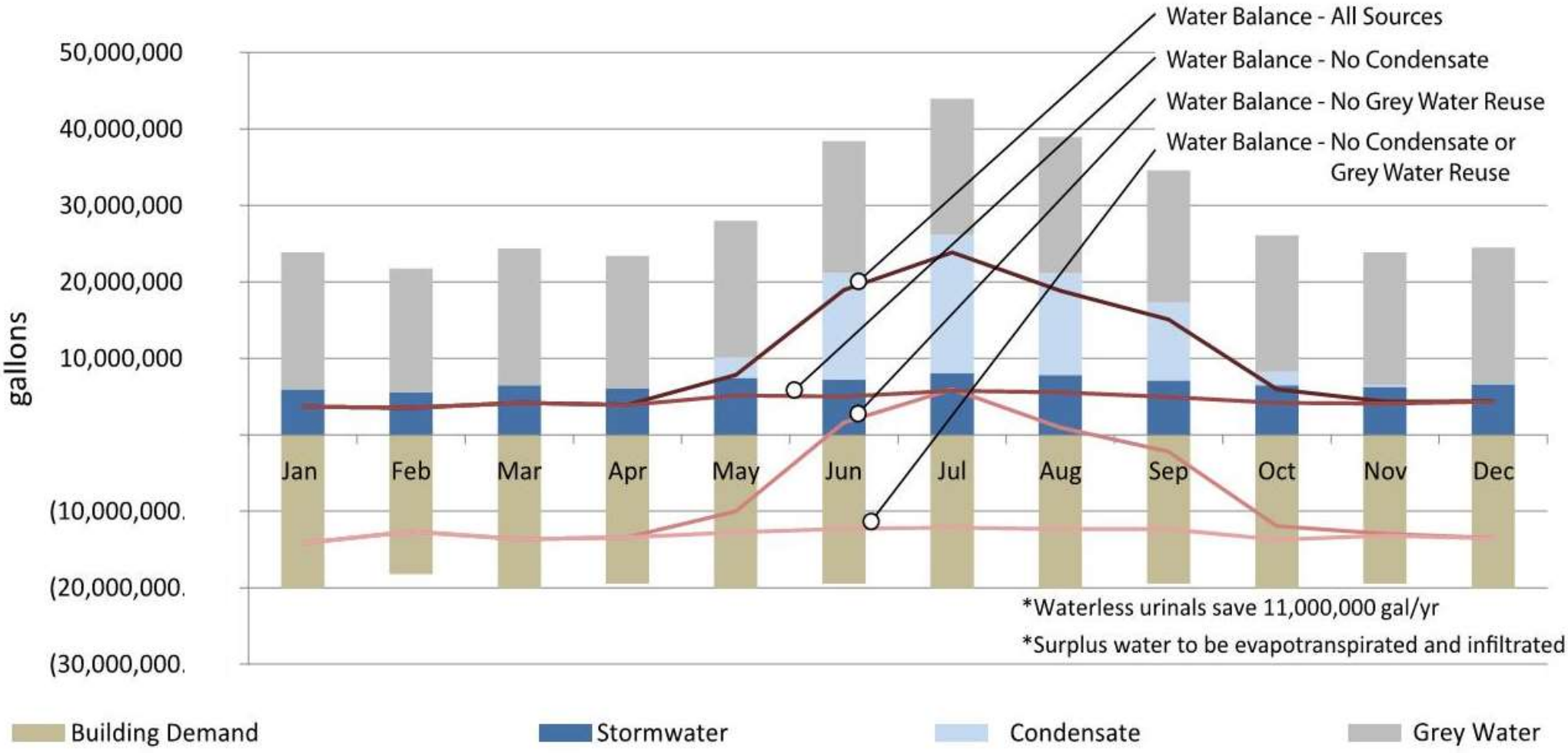
20% Reduction

Natural

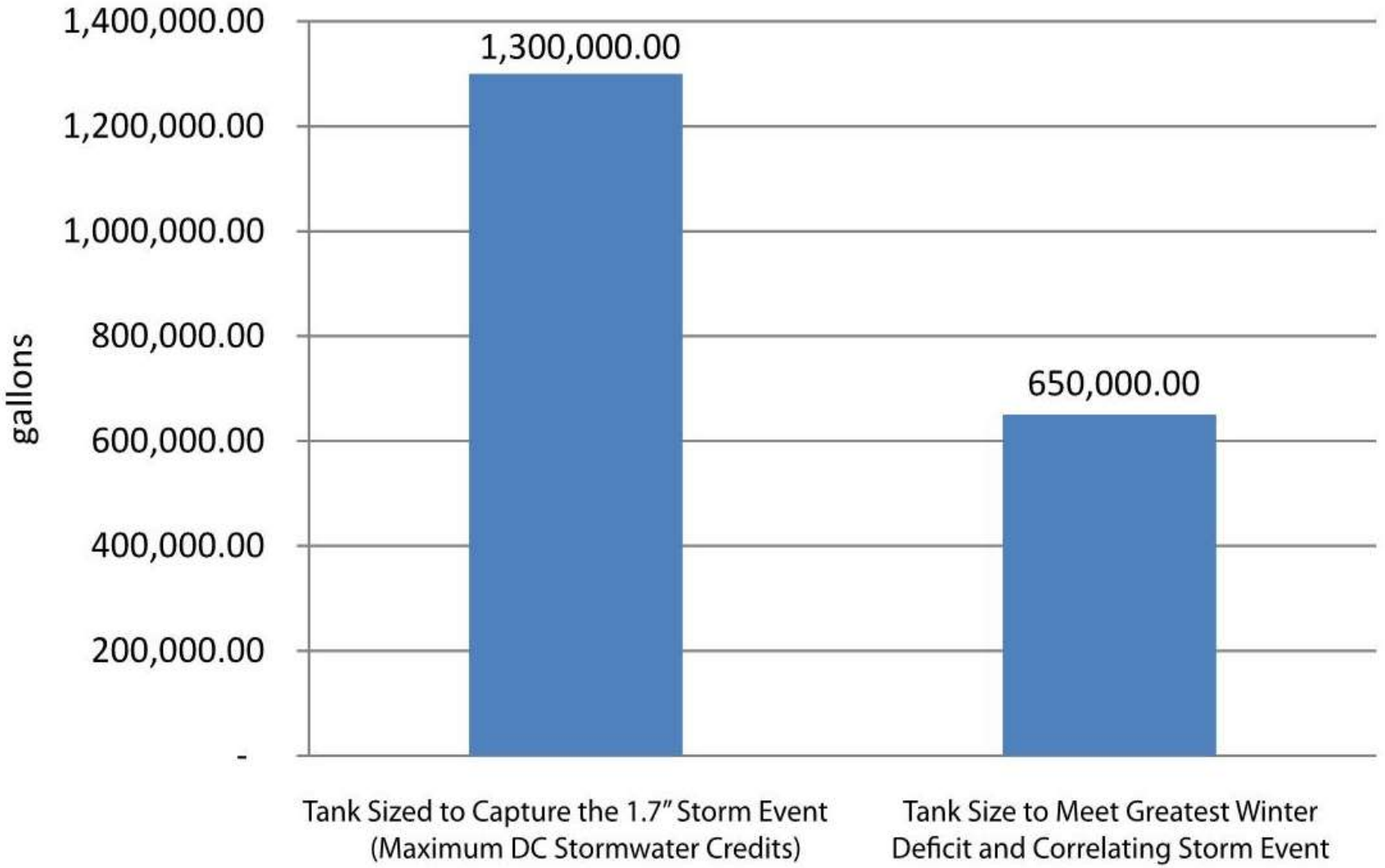
40% Reduction

Based on DDOE Stormwater Guidebook

Modeled Monthly Water Balance

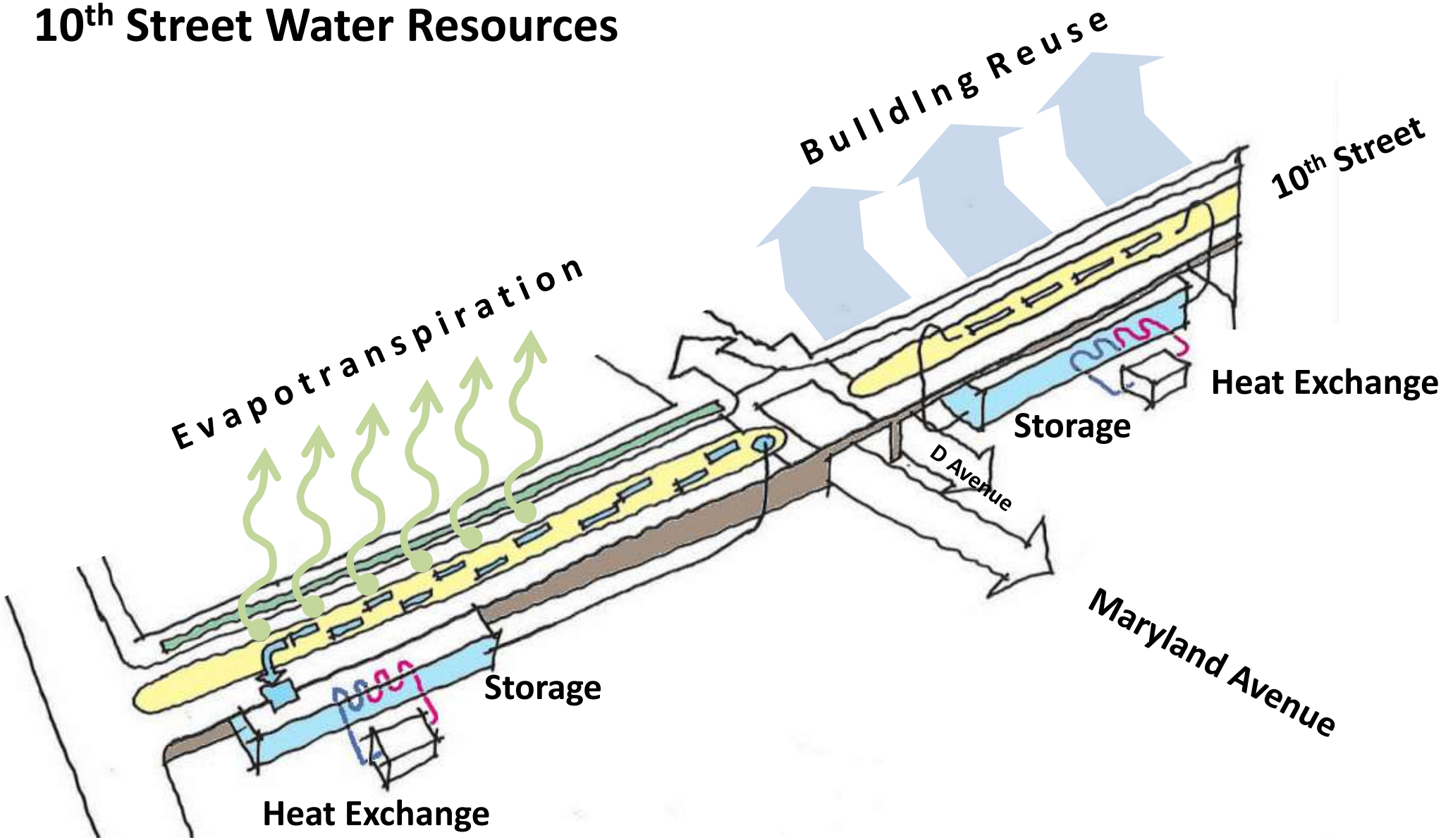


DDOE 10th Street Corridor Cistern Sizing

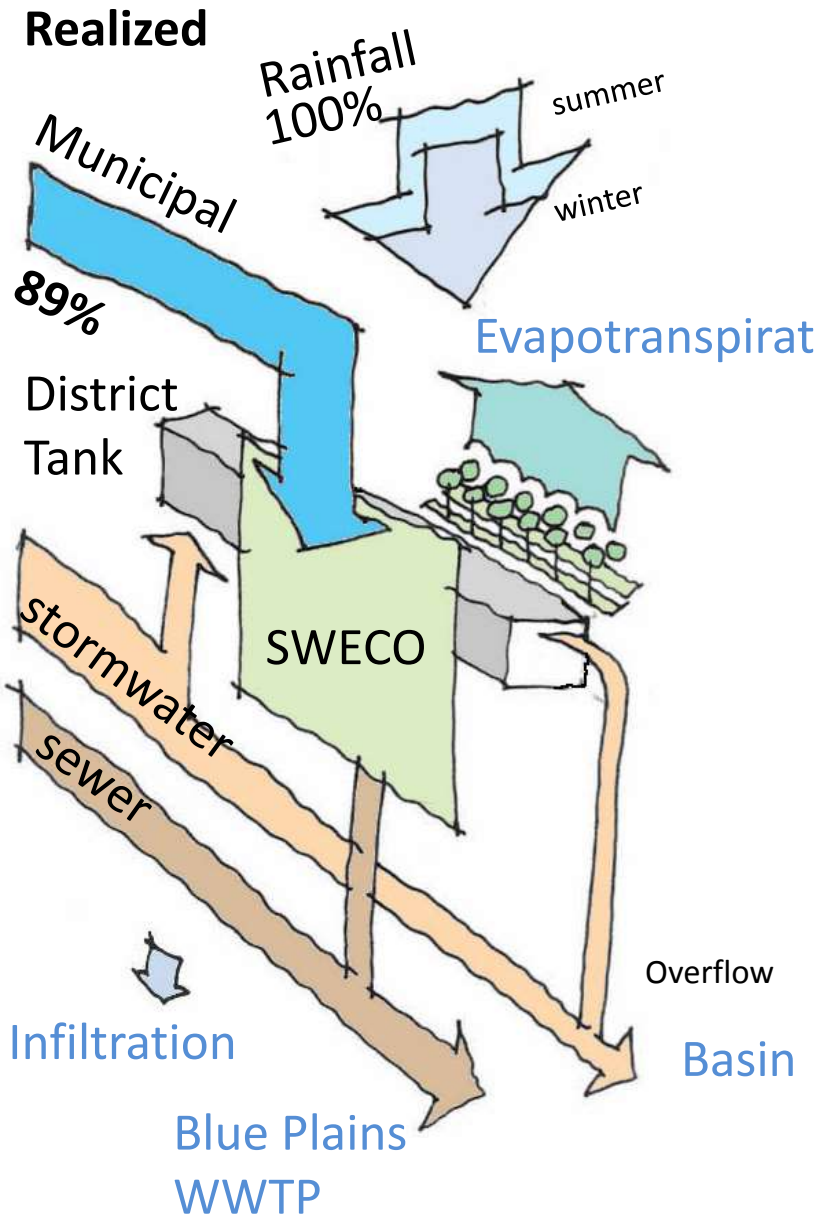


Tank Dimensions	H 20' x W 20' x L 435'	H 20' x W 20' x L 217'

10th Street Water Resources

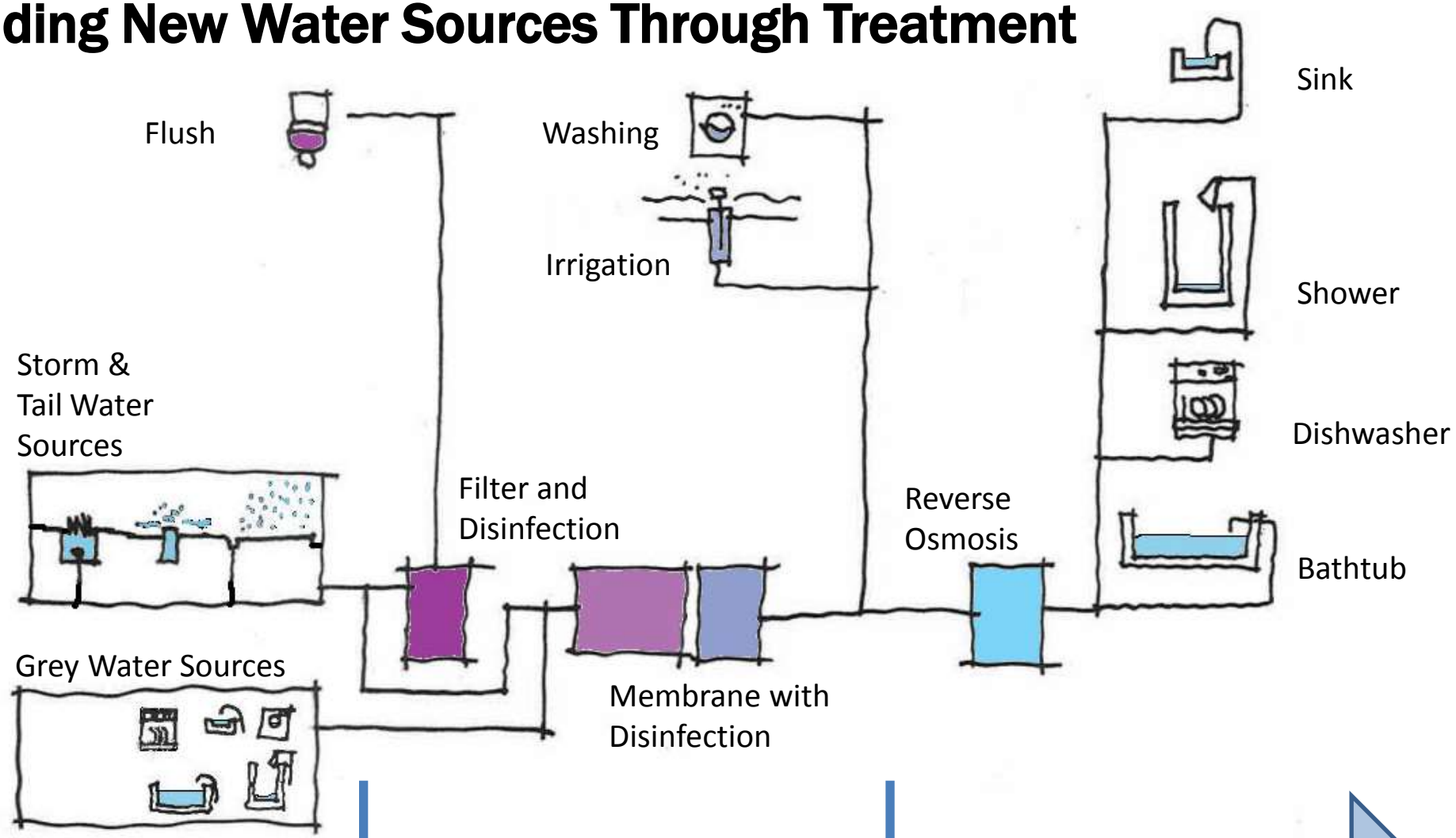


Filter and Treat Water for Toilet Flushes



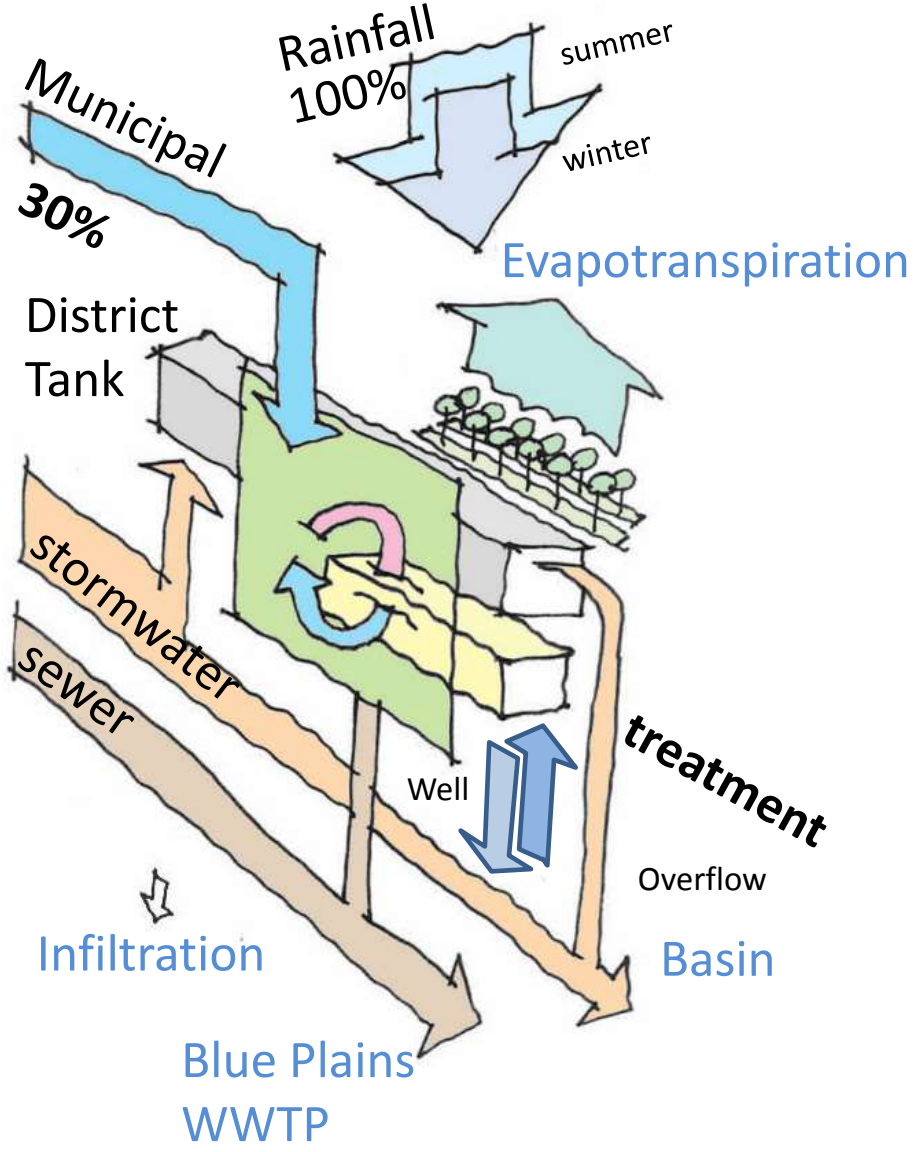
- Volume reduction from plants due to evapotranspiration.
- Storage and reuse of the 1.7” Storm Event.
- 11% of water demand when rainfall is collected, treated, and reused only for toilet flushes.
- 89% municipal water is needed to meet 10th Street Corridor demand.
- Need to reuse more rainwater to collect the stormwater Credits.

Finding New Water Sources Through Treatment



Treating Waters To Close The Gap : 30% Municipal Water

Potable Treatment



- Volume reduction from plants due to evapotranspiration.
- Storage and reuse of the 1.7” Storm Event.
- 11% of water demand for toilet flushed is from treated grey water or condensate.
- 30% Municipal Water is needed to meet 10th Street Corridor demand.
- 59% of water demand is from treating storm, condensate, and well water for potable uses.

Take Aways

1. Preliminary Recommendation:
   - Use rain and well waters to close the gap on potable water demand.
   - Treat grey water and remnant stormwater for the small amount of non-potable demand.

2. Preliminary Conclusion:
   - We can finance capital as well as meet operating costs with subscriber fees, avoided fees, and credits which contribute to the beauty of 10th Street.

10th Street SW Concept Design
And
Interim Banneker Connection

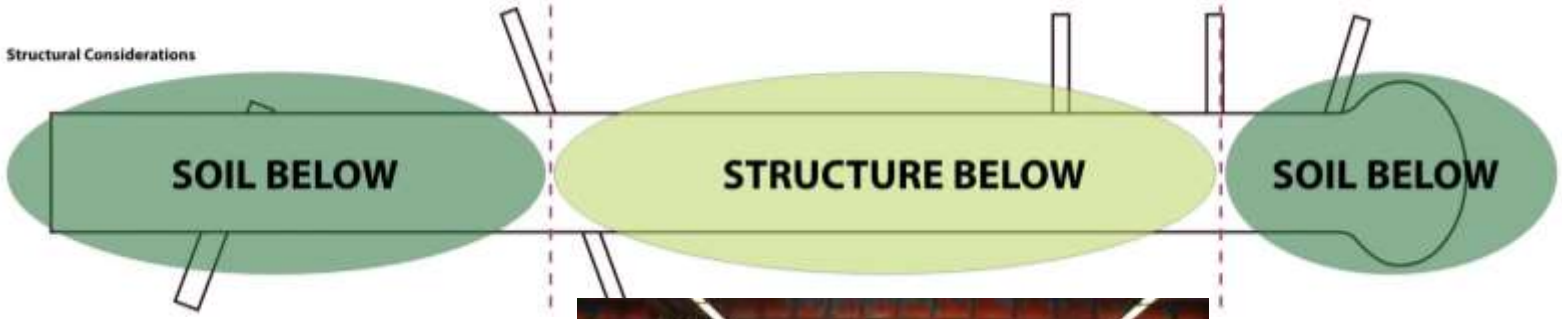
10th Street SW Concept Design and Interim Banneker Connection

1. Overall Design Framework

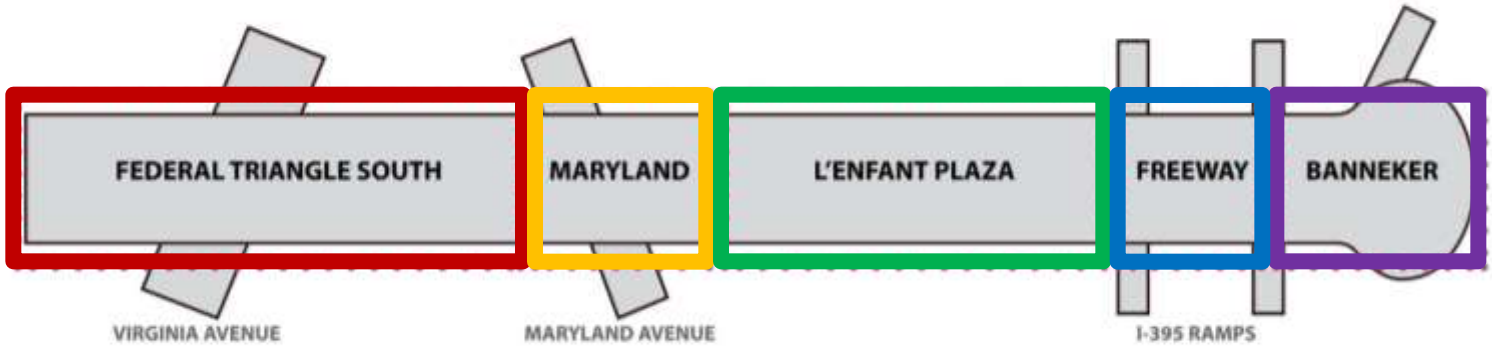
2. Design Alternatives for 10th St. SW

3. Banneker Connection Concept

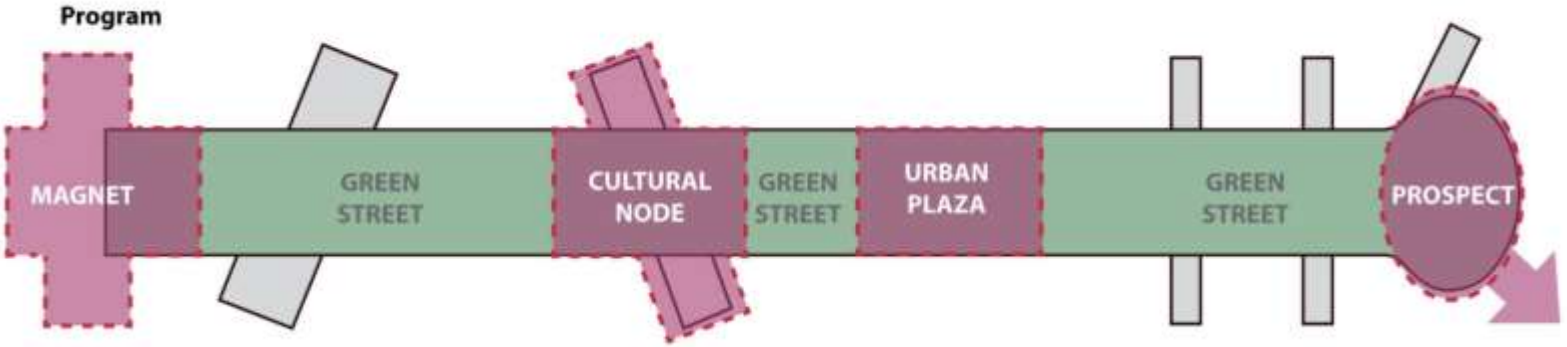
Design Framework – A Street & 3 Bridge Structures



Design Framework – Potential Phasing by Area



Design Framework – Unified Connection with Potential Episodic Features



Short Term – Use Programming to Create Some "Excitement"

A one-block, or 400' long, programmed event

Potential to relocate events from Pennsylvania Avenue to 10th Street

Short Term – Activities and Improvements

Festival and events related improvements, such as:

- **Street Painting**
- **Furnishings**

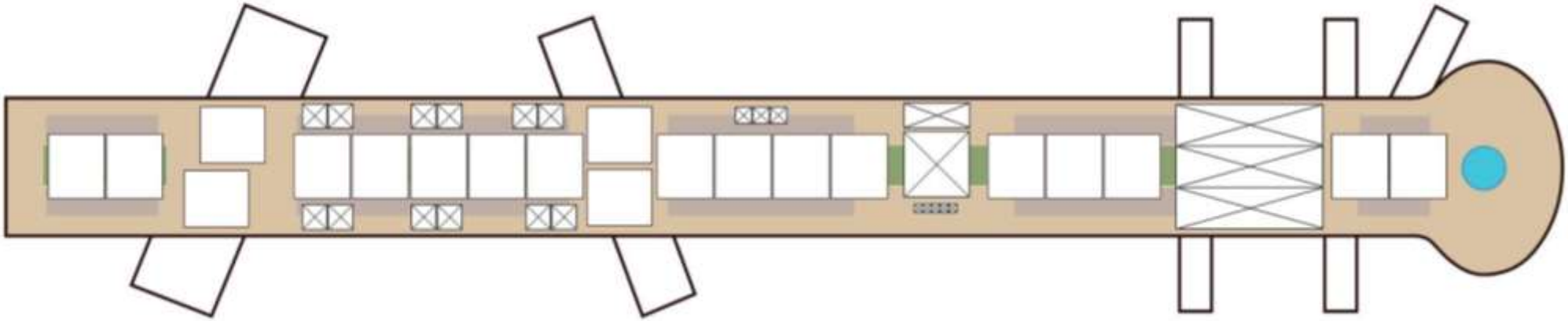


Wayfinding connection to Banneker

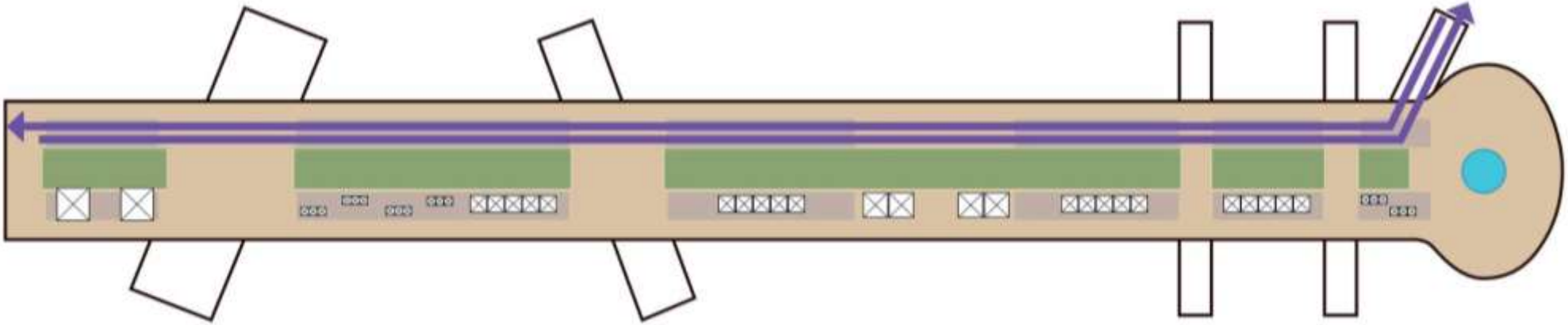
- **Movable Furnishings**
- **Signage**
- **Lighting**


Program "Test Fits" – Consider closing one street for events

SOLAR DECATHLON
1@80x80, 20@70x80, 1@30x80, 6@30x30, 3@20x20, 3@10x10, 150x180 storage area
REQUIRES USE OF INTERSECTIONS, MEDIAN, AND CLOSING ALL TRAFFIC



HARE KRISHNA FESTIVAL OF INDIA
1@40x60, 3@20x30, 9@20x20, 7@10x20, 10@10x10
REQUIRES USE OF STREET



Long Term Improvements – 2005 EA "Base Case"

ENVIRONMENTAL ASSESSMENT: L'ENFANT PROMENADE & BENJAMIN BANNEKER PARK IMPROVEMENTS

FIGURE 3-2: Proposed L'Enfant Promenade Improvements, Wide Median Design Option

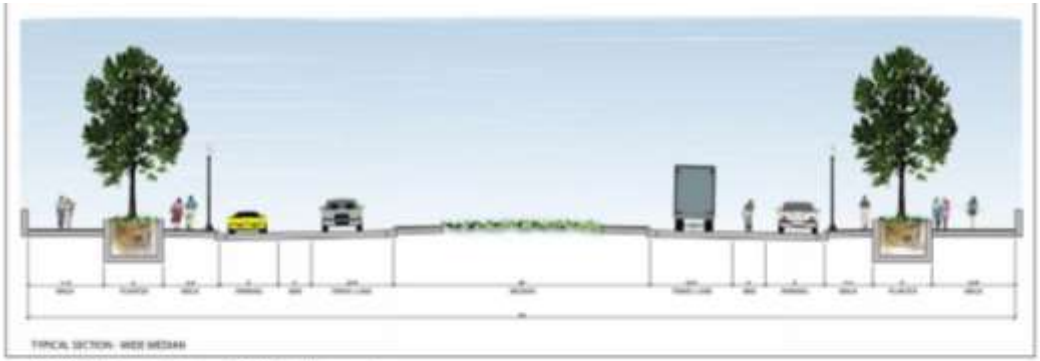


FIGURE 3-3: Typical Section of L'Enfant Promenade

Table 3-1
Estimated Cost of the Proposed Action (2005 $)

PROJECT OPTIONS	COST
L'Enfant Promenade Improvements	
Narrow Median (retains existing superstructure)	$ 33,516,000
Wide Median (retains existing superstructure)	$ 33,120,000
Maryland Avenue Roundabout	$1,483,000
Reconstruction (including superstructure)	$ 56,661,000
Benjamin Banneker Park Improvements	
ITC and Modify Traffic Circle and Road to 9th Street	$80,223,000

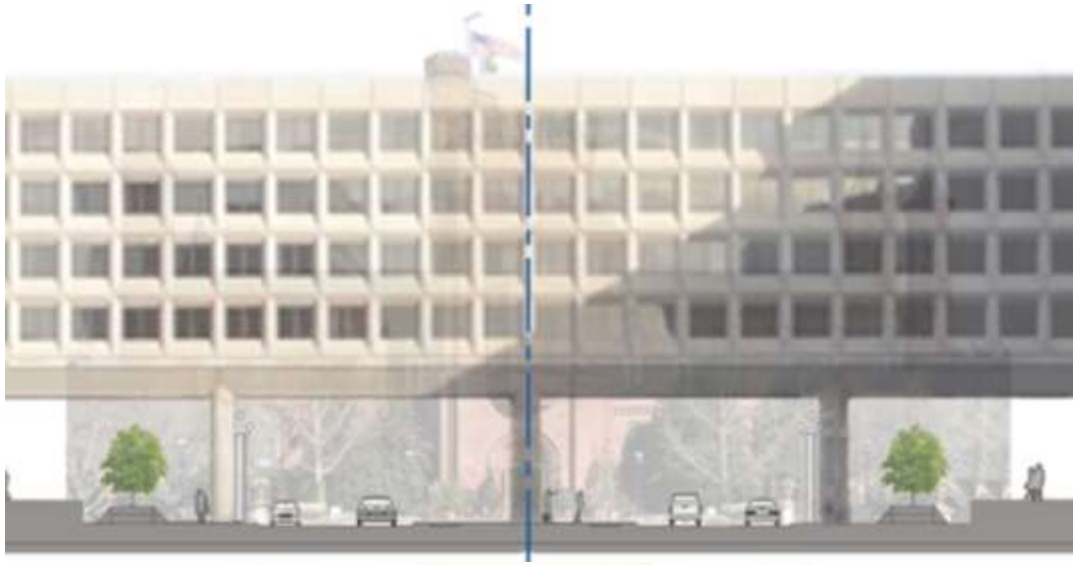
Source: Parsons Brinckerhoff

Table 3-2
Estimated Rehabilitation Cost of the No Build Alternative (2005 $)

REHABILITATION OPTIONS	COST
Basic Rehabilitation	$ 9,488,000
Enhanced Rehabilitation	$ 11,511,000
Total Short-Term Rehabilitation and Enhancement	$ 20,999,000

Source: Parsons Brinckerhoff

Recommended Street Section



150’ R.O.W. - Existing

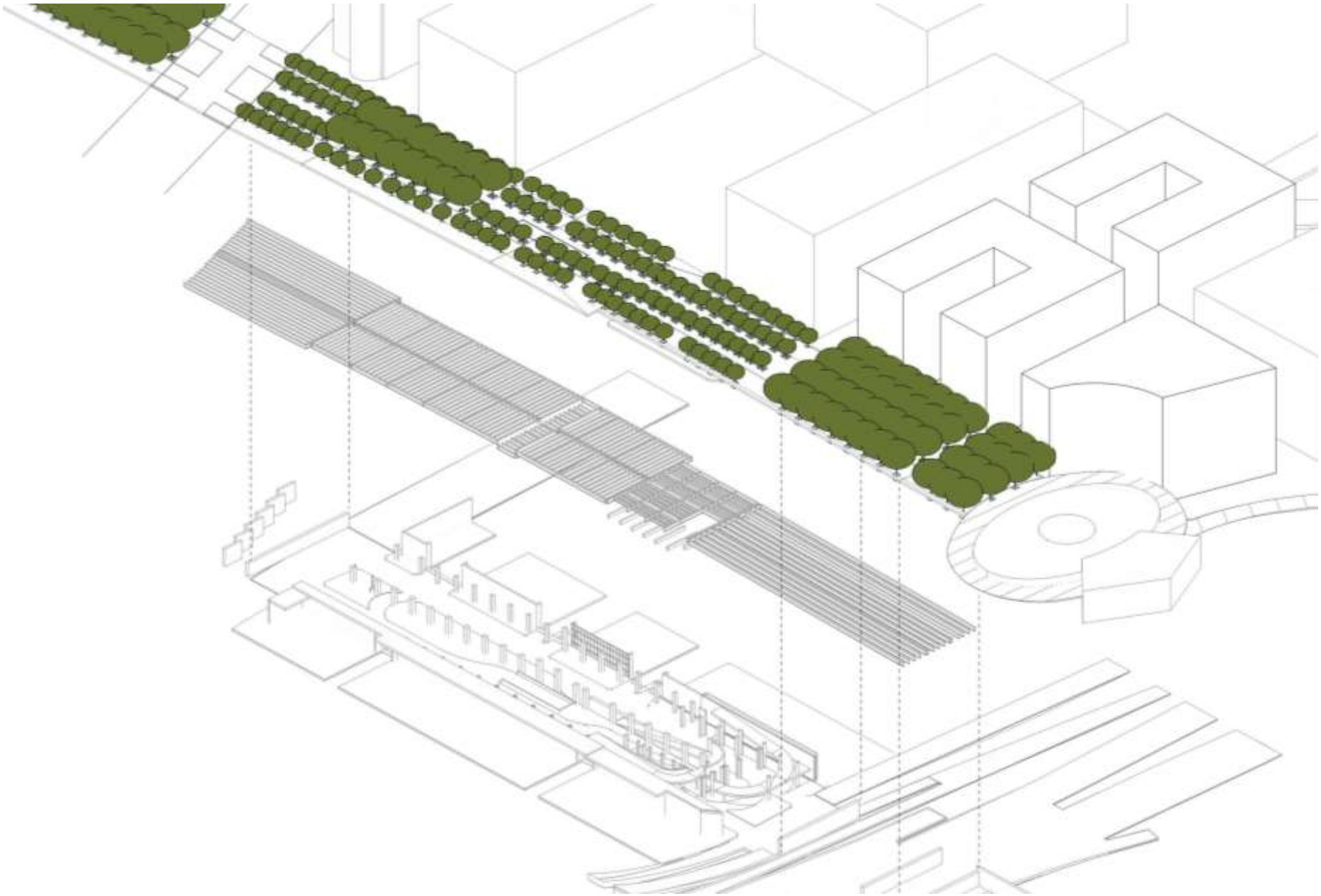
Sidewalk	Road	Median	Road	Sidewalk
29’	26.5’	39’	26.5’	29’

150’ R.O.W. - Proposed

Sidewalk	Road	Median	Road	Sidewalk
24’ Bike 5’	20’	52’ Potential Programmed Space	20’	24’ Bike 5’

Goals
- **Improve Median Use**
- **Potential for Curbless**
- **Minimize Outer Curbline Changes**

Evaluating Bridge Structure to Inform Potential Tree Rhythm



Planting Trees on the Bridge Structure And Canopy

Large Trees – Partial median reconstruction

Medium Trees – Within reinforced structure, and raised planter bed

Small Trees – Within reinforced structure

Integrating Stormwater within Tree Planting

STORMWATER NOT INTEGRATED WITH TREE PLANTERS

Not Integrated With Stormwater

STORMWATER INTEGRATED WITH TREE PLANTERS

Integrated With Stormwater

3 Diagrammatic Alternatives

An emphasis on hardscape

- Trees flush with pavement
- Most flexible for programming in median
- Most extensive “curbless” median

An emphasis on softscape

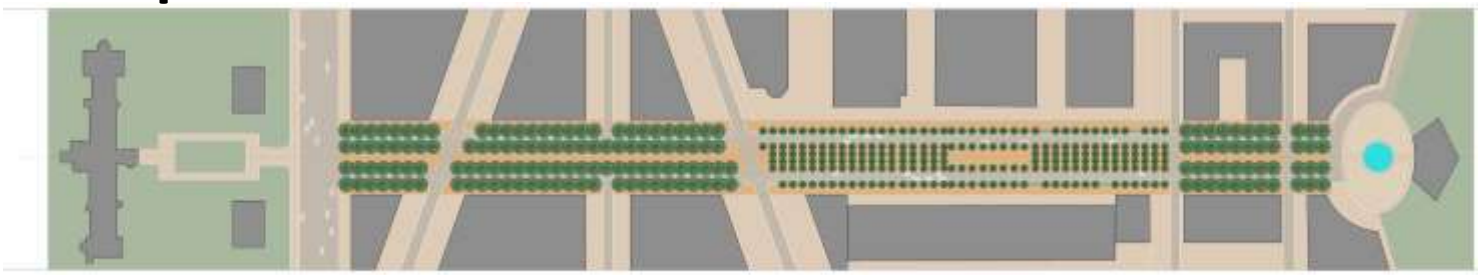
- Reinforce the “continuation of the Mall”
- Create passive opportunities
- May integrate linear stormwater features
- Select programming along median

An emphasis on water treatment

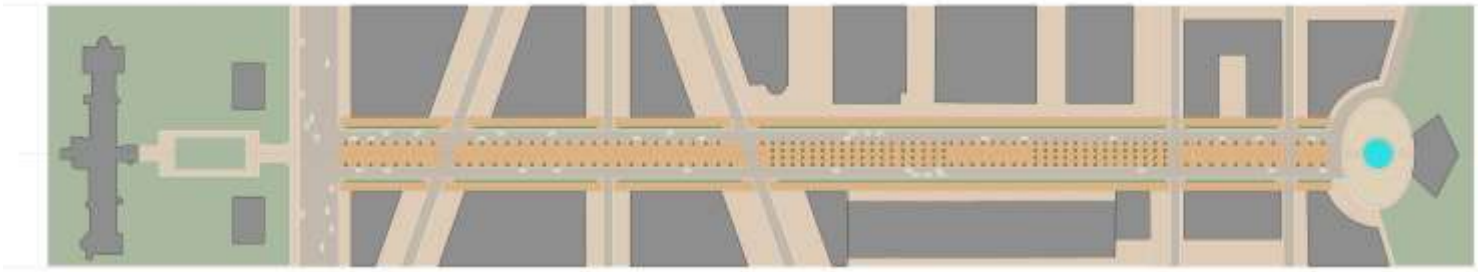
- Bring water to the surface to reinforce the ecodistrict experience
- Select programming along median

Emphasis on Hardscape – Framework

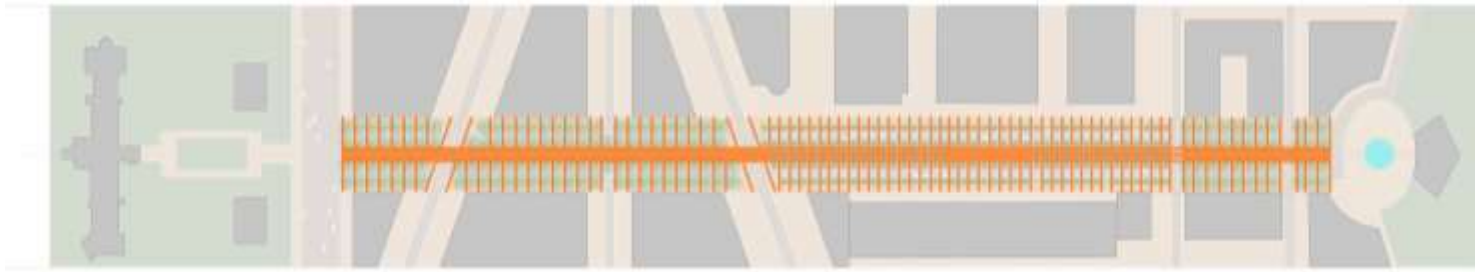
Tree Canopy



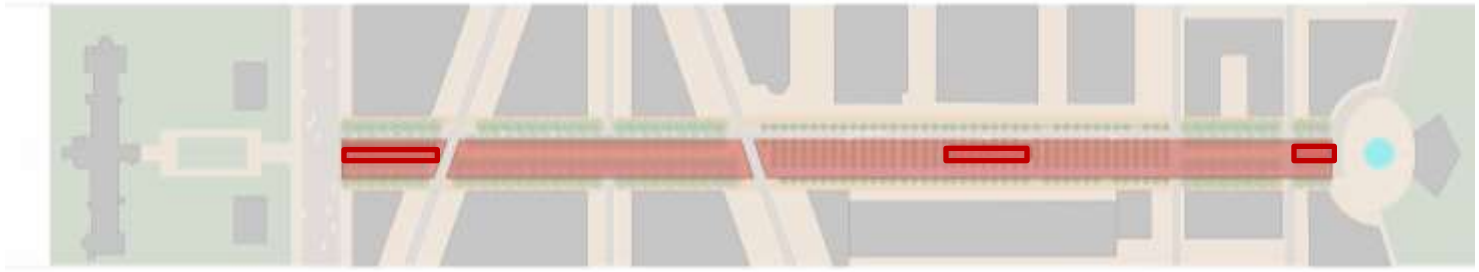
Ground Plane



Circulation

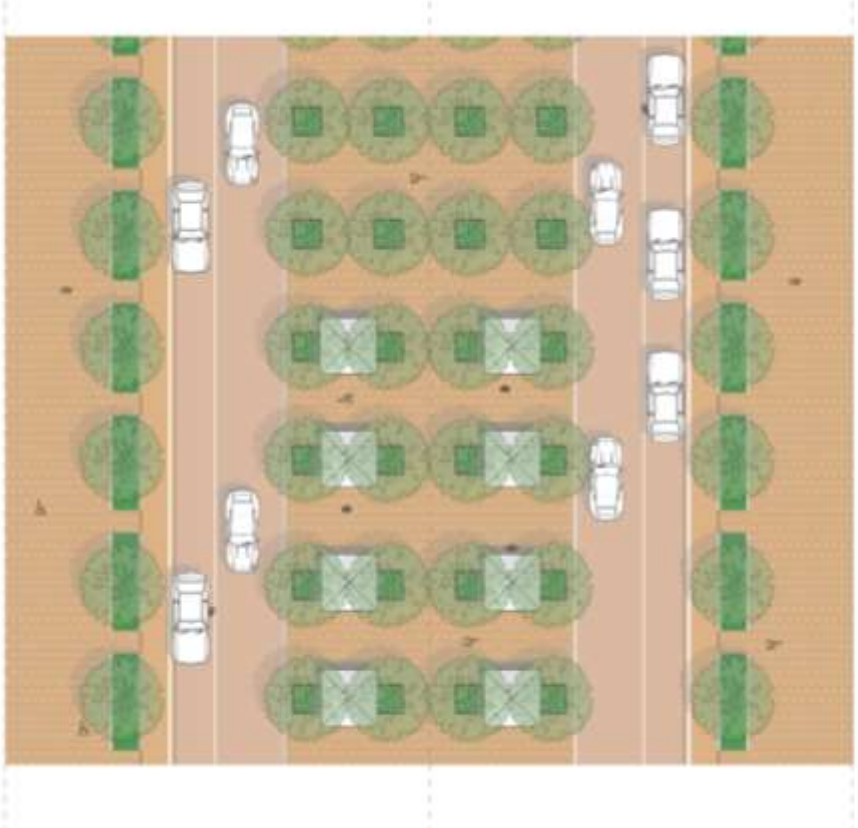


Programming

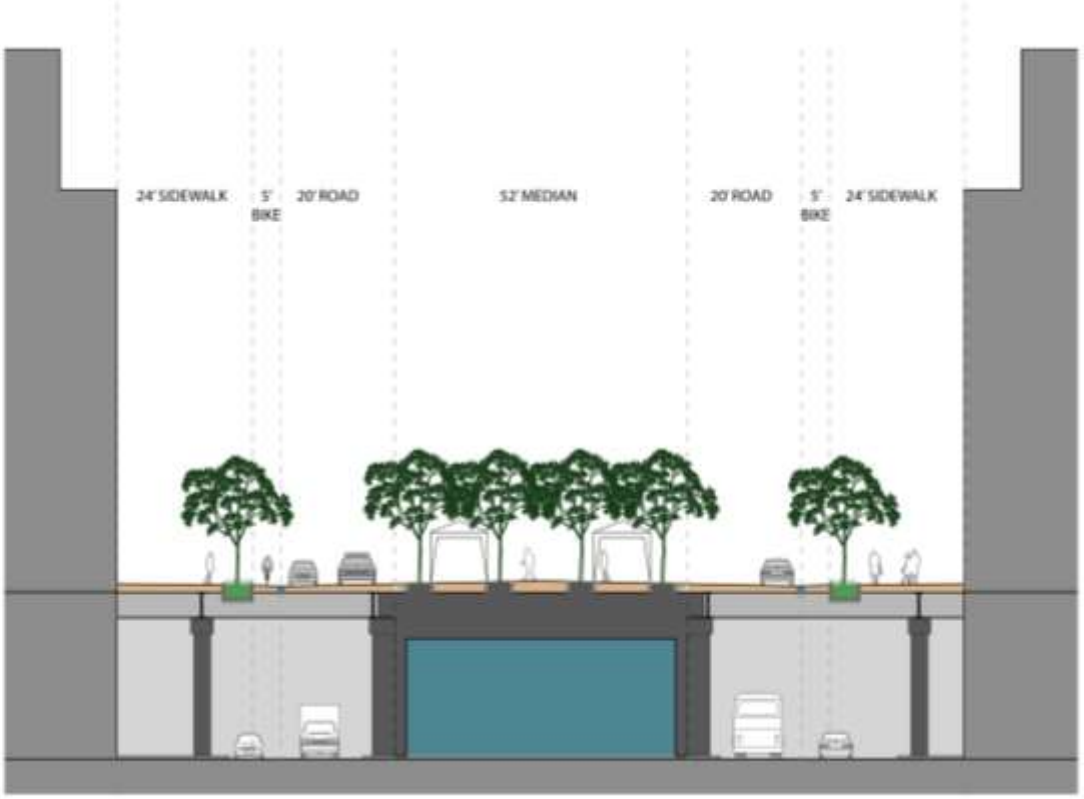


Emphasis on Hardscape

Partial Plan



Section at L'Enfant



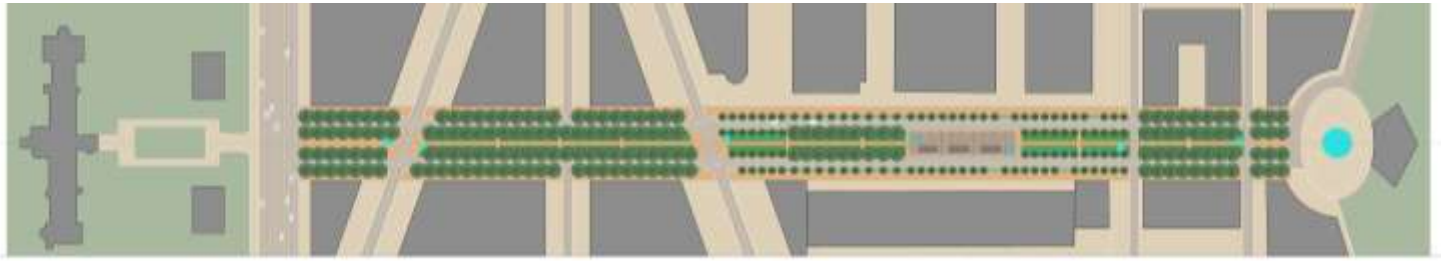
Emphasis on Hardscape – Precedent Images



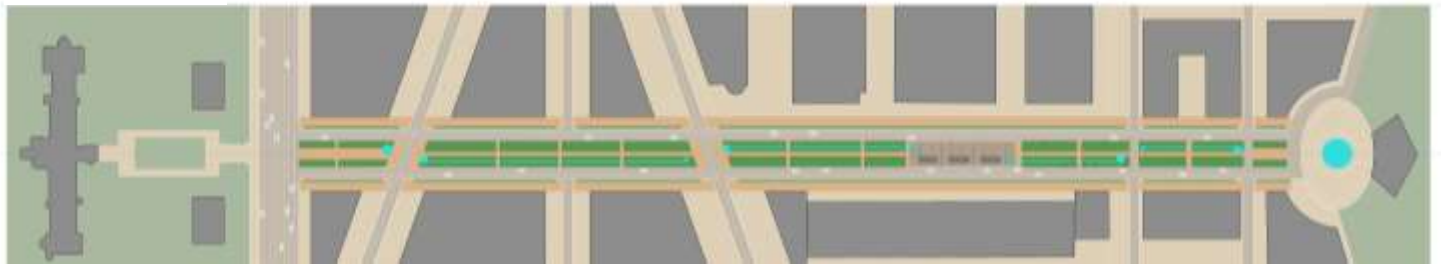



Emphasis on Softscape – Framework

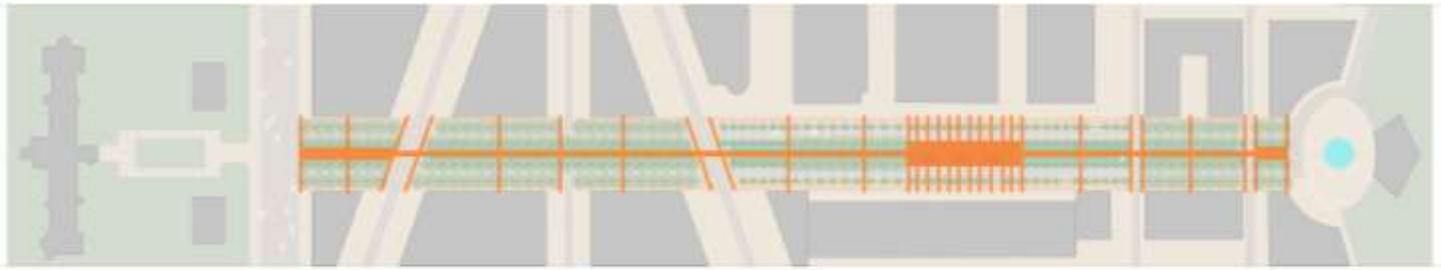
Tree Canopy



Ground Plane



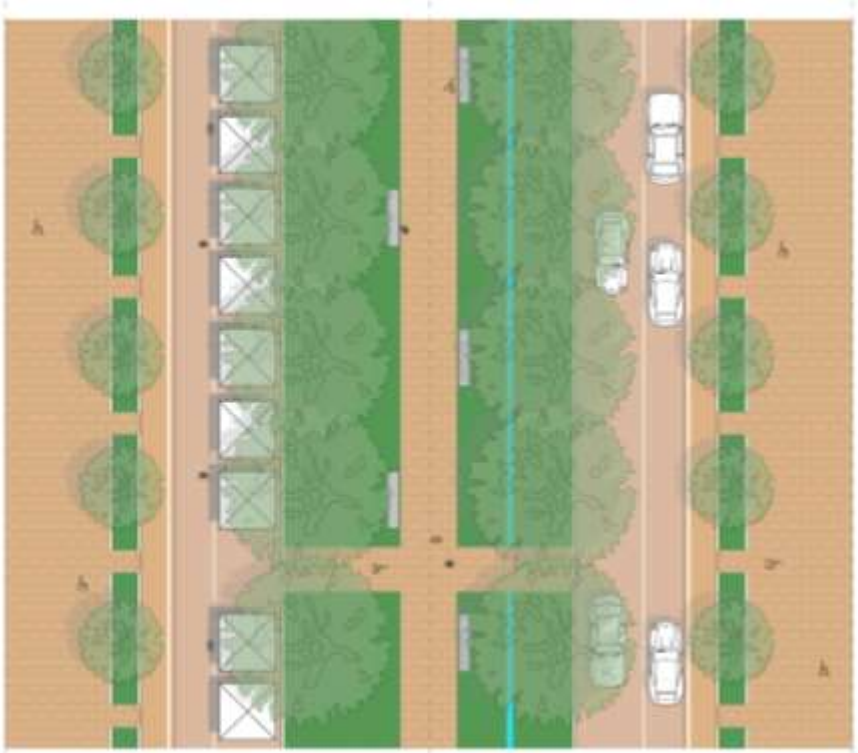
Circulation



Programming

Emphasis on Softscape

Partial Plan



Section at L'Enfant

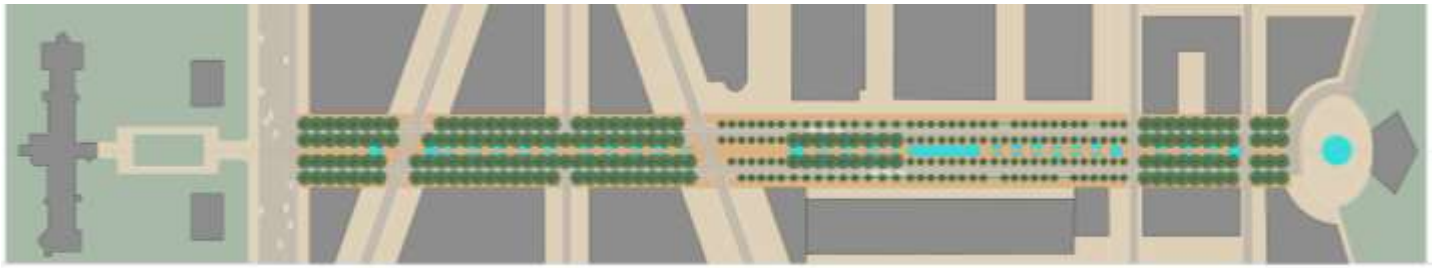
Emphasis on Softscape – Precedent Images



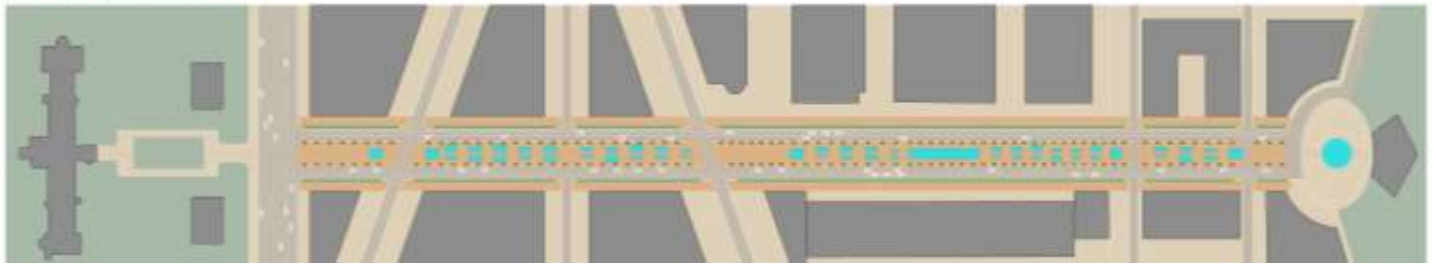



Emphasis on Displaying Water – Framework

Tree Canopy

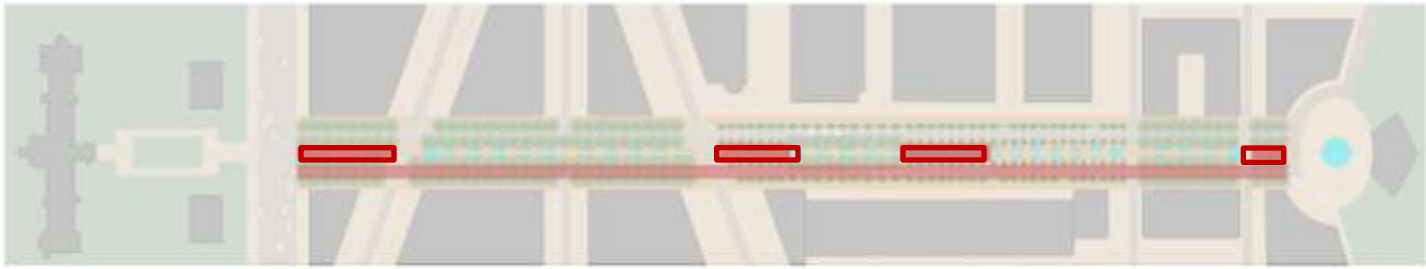


Ground Plane



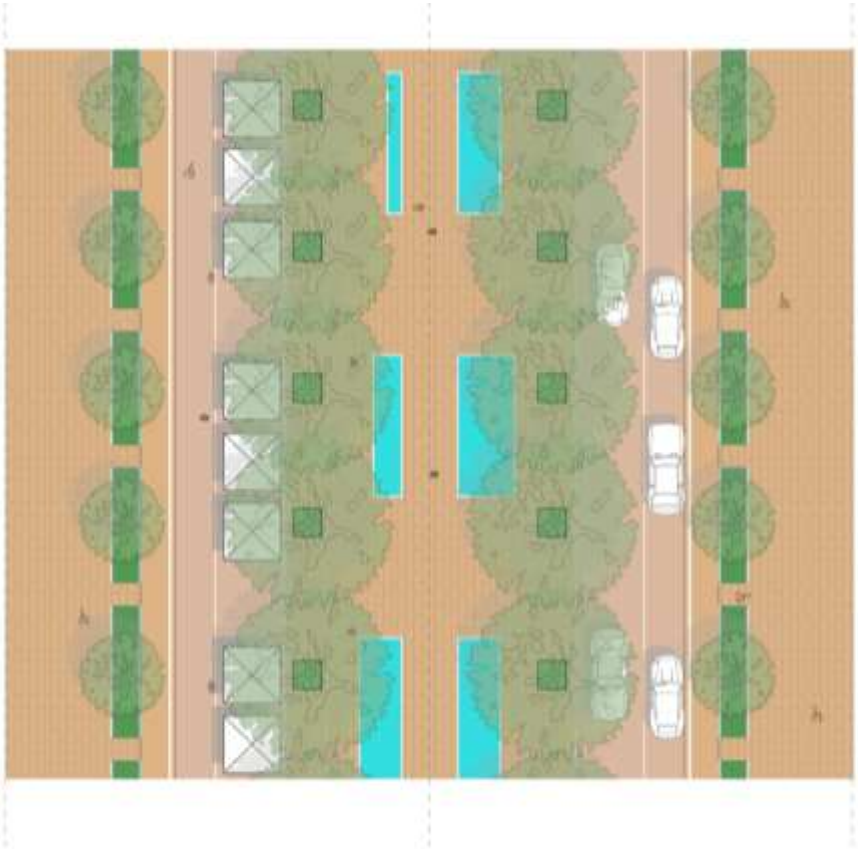
Circulation

Programming

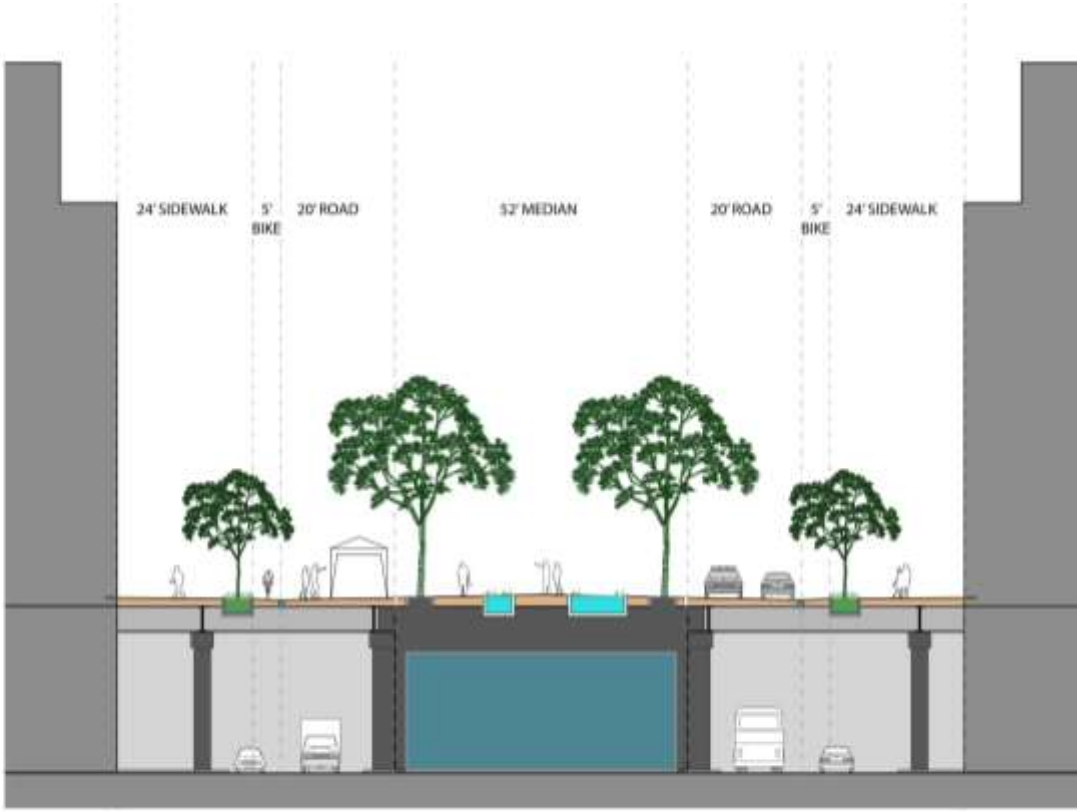


Emphasis on Displaying Water

Partial Plan



Section at L'Enfant

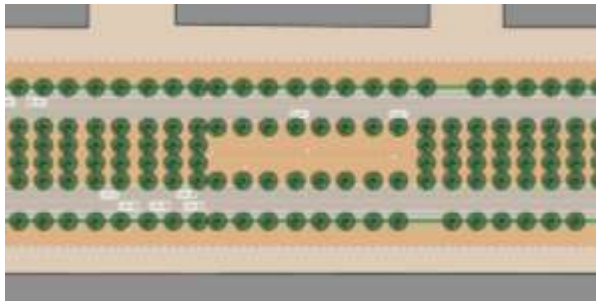
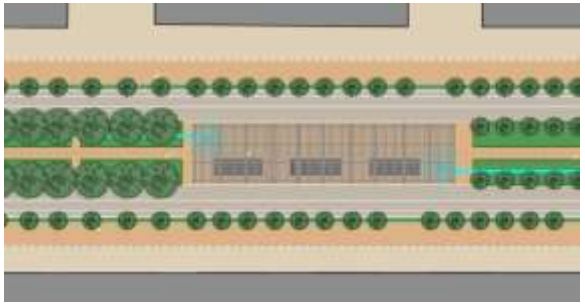
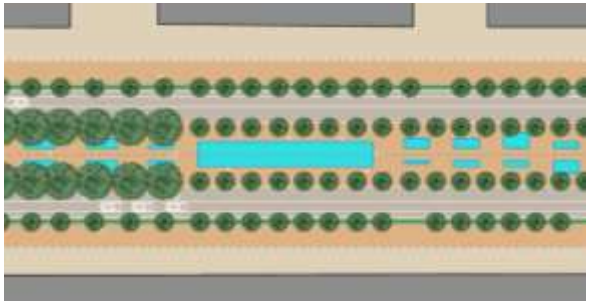


Emphasis on Displaying Water – Precedent Images






Plaza Programming and Elements

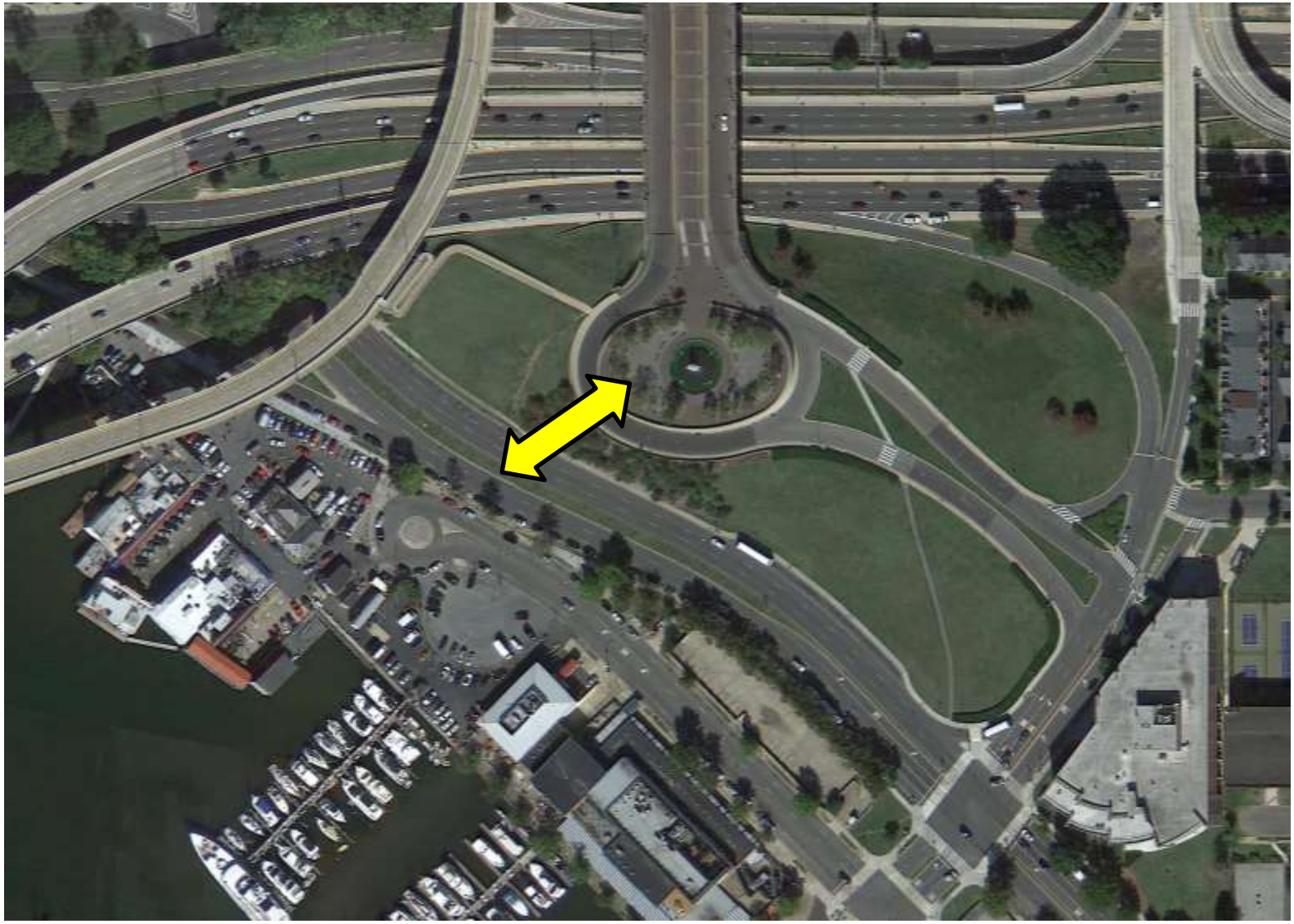

The three concepts illustrate 3 potential strategies for the programmed plaza at the peak of the street, and for creating episodic features along the street:

An opening in the bosque of trees – accommodates flexibility, moveable furniture, etc.

An architectural approach – provides cover, relates to tree rhythm

An interactive water feature – potable water is used at the peak, and is treated as it flows down the street.

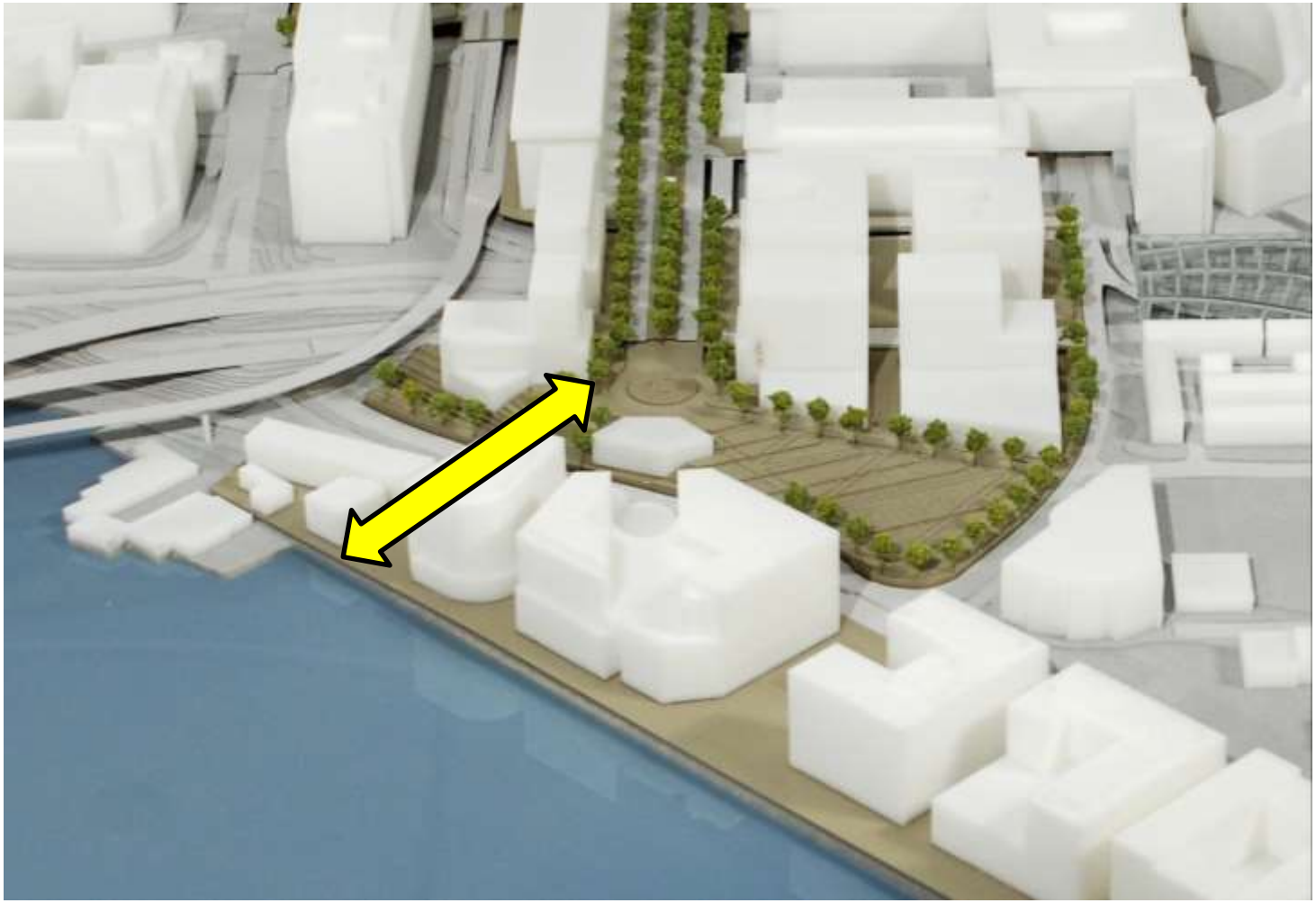
Banneker Interim Connection



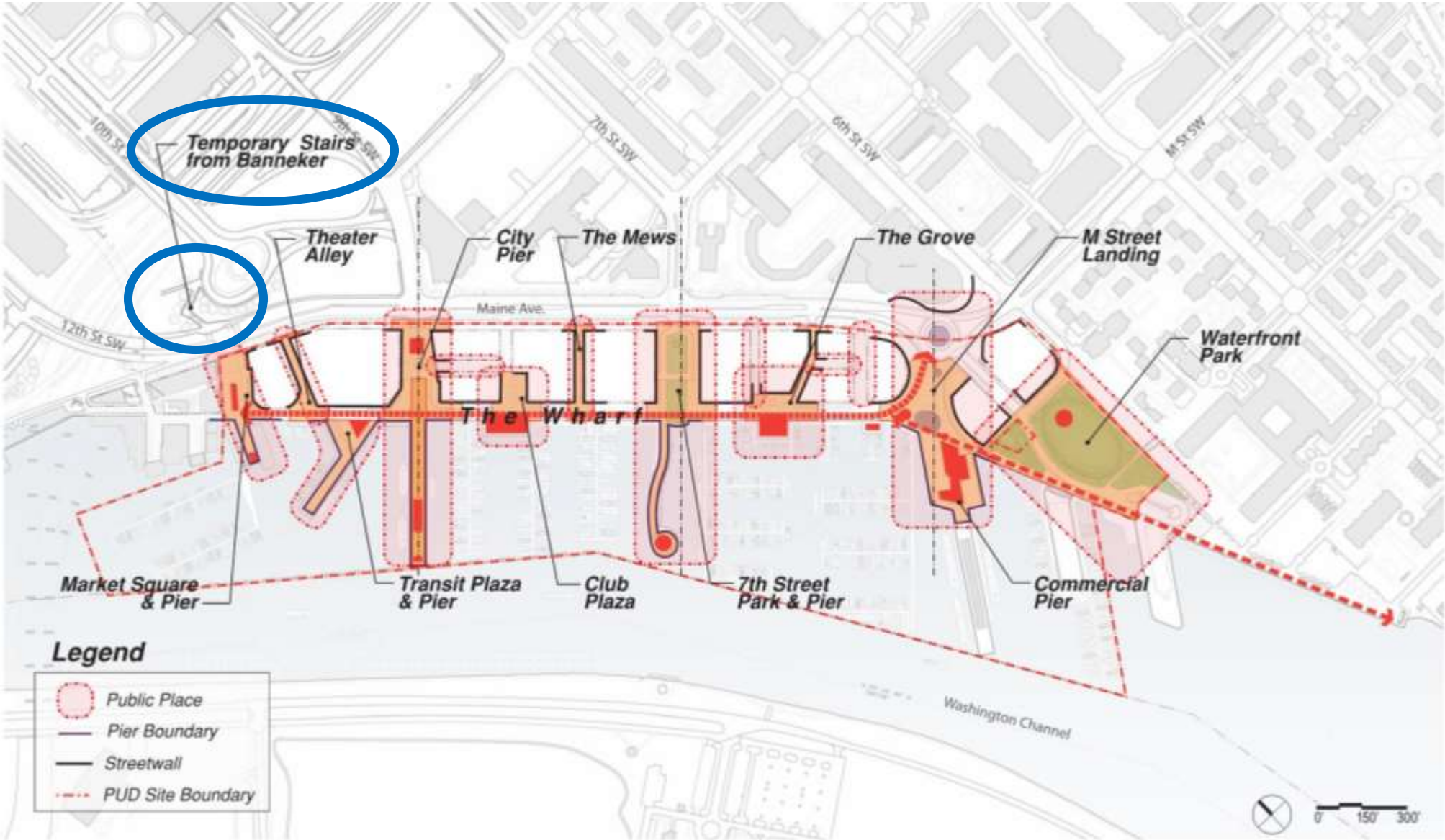
Banneker Interim Connection

Concept design for interim connection, considers:

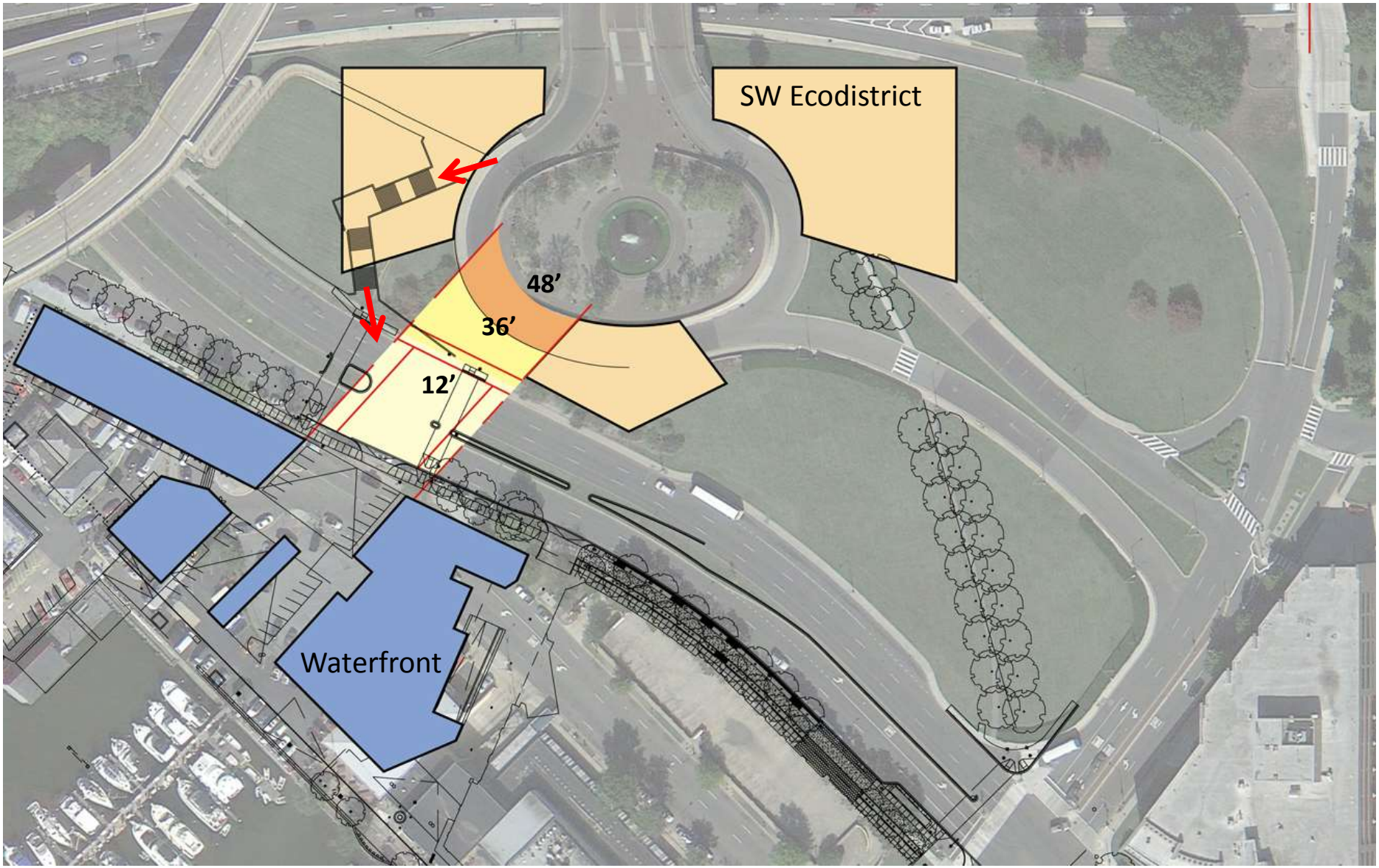
- **Potential phasing**
- **Universal experience**
- **Wayfinding between 10th and Waterfront**



Leveraging the SW Waterfront Commitment



The 100’ Wide –
Connection and View Corridor, Grades and Phasing

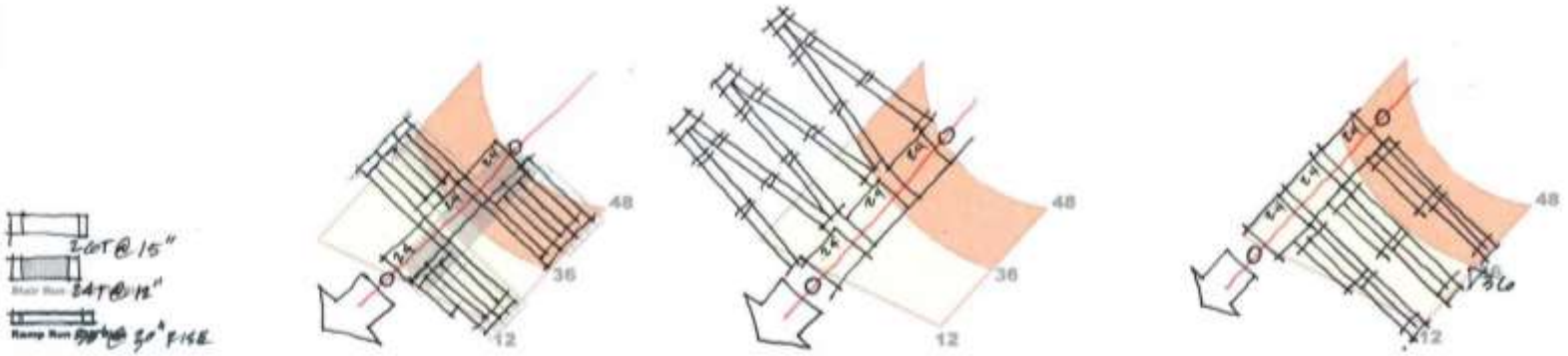


Concept Illustrations - Existing

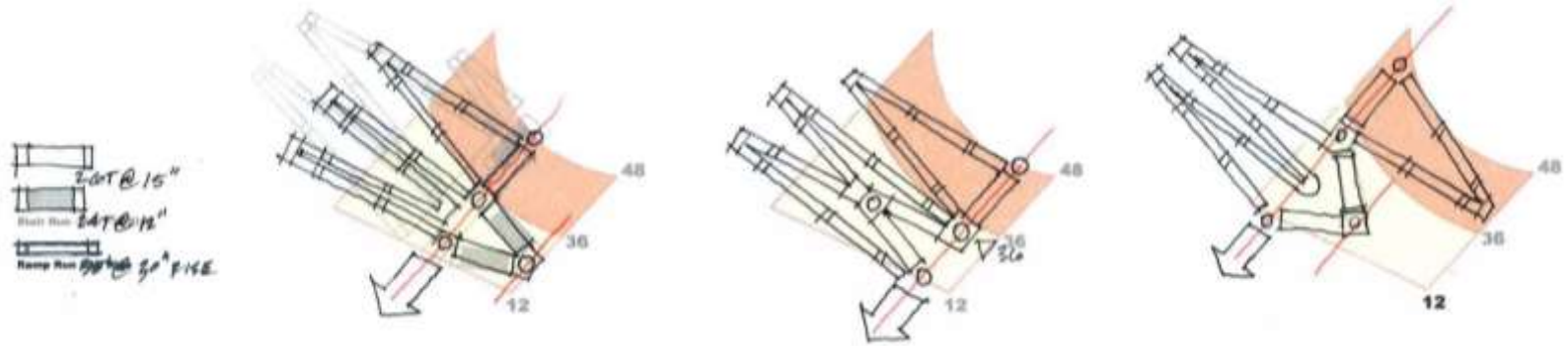
Concept Definition

Preliminary Test Fits – Integrating Stair & Ramp within Phasing

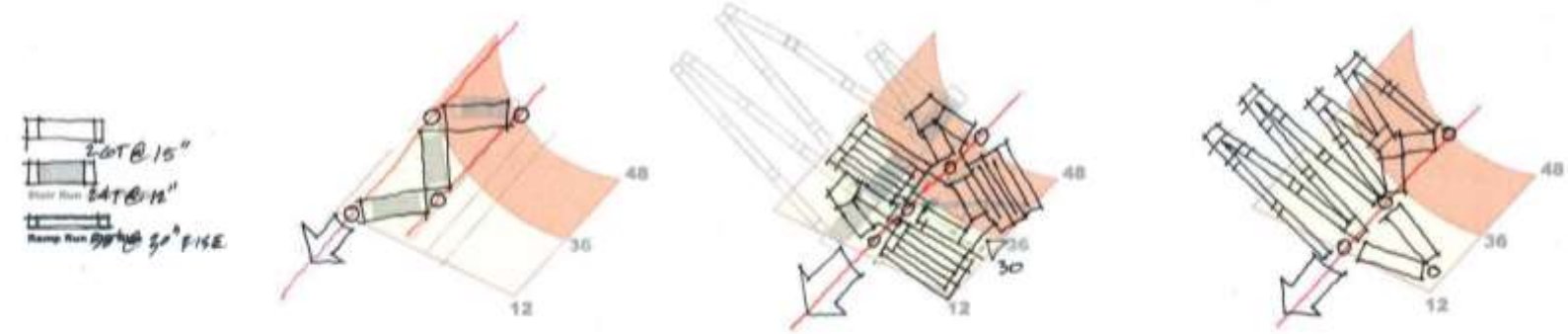
Straight steps



Straight and switchback



Switchback



Concept Diagram

Concept
Design Character

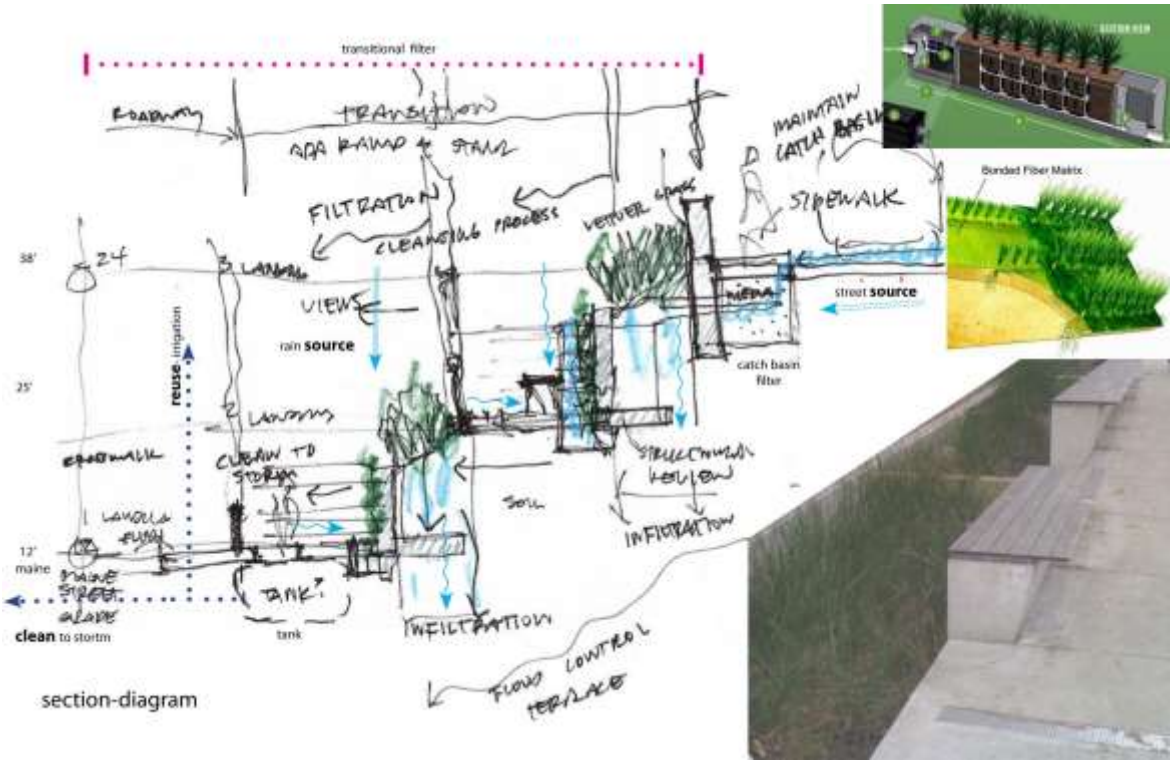
Monumental

Contemporary

"District"

Natural

Concept
Integrate Stormwater and Green Walls



section-diagram

Concept
Wayfinding – Ground Plane, Signage, Lighting / Vertical Elements





Interim Banneker Connection

- Is the phasing strategy / general layout the right approach?
- What should be the design character of the connection?

10th Street Connection

Is there a preference for the design of 10th Street SW to:

- Support a programming, and at what scale?
- Be more linear or episodic?
- Feel more like a park or a street?
- Reflect a more formal experience?
- Represent the ecodistrict story?